An Address
ON
NOTIFICATION OF PULMONARY PHTHISIS.

Delivered at the Forty-eighth Annual Meeting of the Forfarshire Medical Association in University College, Dundee, on June 28th, 1906.

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GENTLEMEN,—When Pasteur finally disposed of the oxygen theory of fermentation and placed the vitalistic theory of that process on the basis of demonstrated fact he went a long way in the direction of verifying the remarkable prophecy of Boyle two hundred years earlier. "The man," said Boyle, "who shall probe to the bottom the nature of ferments and of fermentations will doubtless be much more capable than any other of giving a true explanation of the divers morbid phenomena both of fevers as well as of other affections." Pasteur's masterly researches in the morphology and physiology of micro-organisms laid the foundation of that science of bacteriology which enabled Lister a few years later to rescue the treatment of wounds from a disastrous empiricism and to replace it by a method at once scientific and beneficent, and enabled Koch, after a generation, to make his brilliant discovery of the tubercle bacillus and to end the long-standing controversies as to the nature of pulmonary phthisis and those other tuberculous diseases which we now know to have a common origin. It is the merest truism to say that Pasteur, the French chemist, Lister, the British surgeon, and Koch, the German pathologist, will rank for all time among the foremost men of science and the most honoured benefactors of mankind.

Since Koch's discovery the medical profession and the public have not been idle in their efforts to check the spread of tuberculous disease and to help the recovery of its victims. These efforts are too well known to need repetition now. But before entering on questions which will afford opportunities for difference of opinion and discussion, it may be well to clear the air by a brief summary of the points on which we may be fairly presumed to agree. Tuberculosis is the most fatal of all the diseases of man and the domestic animals; it is most prevalent during adolescent and adult life; it is therefore very costly in loss of life and working power in the most productive years and those most important for the welfare of families and communities. It finds its favourite abode amid poverty, overcrowding, want of cleanliness, air, and light. It is communicable, and the chief mode of infection is the inhalation of dust containing the dried secretions of pulmonary and laryngeal tuberculosis. It is not conveyed from the breath or perspiration. There is no satisfactory proof of the multiplication of the germs outside the body. No direct germicide has yet been found which we can use without the certainty of doing infinitely more harm to the lung tissue than to the bacillus. The last fifty years, which witnessed enormous improvements in general sanitation, have been accompanied by a steady reduction in the mortality from pulmonary phthisis, even apart from special efforts directed to its prevention. All of us are at one in desiring to check its ravages still further.

Now I think we may safely venture on the sea of controversy. Many meetings and congresses have been held, some of them of prodigious length, and have expressed themselves for and against notification. Some medical officers of health are in favour of voluntary and some of compulsory notification. In 1902 a Committee of the House of Commons expressed approval of compulsory notification but not of local enactments. A year ago the Scottish Local Government Board issued a schedule of inquiry on the "administrative control of pulmonary phthisis" with the object of ascertaining the practice of local authorities. Briefly put, the result of the inquiry was that "in no locality have the local authority adequately developed the special organisation necessary for the full administrative control of the disease." In March of this year the Board issued another circular with the view, as it was said, of assisting local authorities in Scotland "in developing and completing their administrative machinery." This circular goes straight to the point by declaring that "pulmonary phthisis is an infectious disease within the meaning of the Public Health (Scotland) Act, 1897," and after a great deal of excellent advice it goes on to say that for the effective application of the Public Health Act to pulmonary phthisis a system of notification is essential but that "unless it is to be followed by effective measures for the curative treatment of the patients and for prevention of the spread of infection the Board will not feel justified in approving of the compulsory notification of cases of the disease." In the last sentence there is the true ring of the practical administrator and I am sure that the Board has only one object in view—the public welfare—and has no desire to encourage local authorities in the exercise of arbitrary power. Still, one may be allowed to express regret that phthisis has not been dealt with apart from the Notification Act of 1889 and the Public Health Act of 1897, for it requires only a moment's reflection to convince anyone that fevers of short duration and high intensity of infection, for which these Acts were manifestly intended, are by no means on all fours with phthisis, in which the conditions are exactly reversed. Every case of fever is a menace to the public health but a great many cases of phthisis are not. Someone has said very truly that "the consumptive is not a danger in himself, but only becomes so from bad habits." Yet local authorities are now endowed with the same powers in both cases, including the right of entry into suspected houses. Notification is therefore in the air and this must be my apology for bringing the subject before you to-day and for telling you many things which you already know. Stripped of verbiage the problem can be stated in four words—sputum and its disposal. Patients are dangerous to themselves and others only when they neglect timely disinfection or destruction of this secretion in the early stages and when their friends neglect it for them in the later stages. There are thousands of consumptives in private life and in hospitals and sanatoriums who are absolutely innocent of infective power for the simple reason that they practise regularly a few plain rules of personal and domestic cleanliness which may be learned in a few minutes. What is wanted is to induce the uninitiated to enter the ranks of the initiated and until they do so to devise some means whereby the local authorities can guide and direct them for their own advantage and that of their neighbours with the least possible sacrifice of personal liberty. But before the medical officer of health can look after them he must know where they are. How is this to be accomplished? Obviously by some means of notification; and ought this to be voluntary or compulsory?

Here I should like to interpose a word in deprecation of the zeal of two classes of reformers, many of them no doubt the very salt of the earth, whose intervention has not been always helpful. One class regards every consumptive as a danger to his fellows. In addition to his terrible load of suffering and the prospect of an early death he is to be treated as an outcast. A glass spittoon "may be conveniently attached to the person," in imitation, I suppose, of the clapper of the mediæval leper. He is to have a card bearing his name, address, and the date of notification, and if the system is not to be a farce he will require to have his movements recorded on it as if he were a convict on a ticket-of-leave. He is to live apart from ordinary domestic and social life and every obstacle is to be placed in the way of his getting honest employment. Hear a London physician on the subject: "Every man, woman, and child who is tubercular should at once be removed from all possibility of contact, direct and indirect, with the healthy community." Now hear an Edinburgh physician: "Many of these affected cases are at work fatally infecting their fellow workmen as our medical case-books frequently prove." What marvellous case-books! Another enthusiast contributes draft regulations, one of which reads: "Prohibition of patients with actual phthisis [by implication he excludes imaginary phthisis] from frequenting churches, theatres, railway carriages, tramcars, or any public places." Strange to say, the clergy appear to have endured in silence this new excuse for non-church-going. The typical representative of the other class is intense. He lives the strenuous life; he is convinced that victory is delayed solely because the stalwarts, whose motto is "Thorough," are not allowed to have it all their own way, and he talks knowingly of stamping out tuberculosis as if he were dealing with a sporadic outbreak of typhus or a handful of burning tow.

How do things actually stand in this matter-of-fact world? The conditions in which tuberculosis is most prevalent are

improving steadily but the ending of them under any human system is not yet in sight. The practice is not sufficiently general of offering disinfection of rooms and houses after notice of death has been received, or ought to have been received, from the registrars. The hose and the broom are too little used on our pavements, closes, back courts, and yards. The time-honoured custom of sweeping the street dust over the wayfarers and into the houses of those who live up to the standard of open windows still clings to nearly every part of the kingdom and the watering cart is seldom seen in the land save as the herald of coming rain. The protection of meat from contamination on its way from the abattoir to the shop and from the shop to the consumer, and the supervision of the collection and distribution of milk, still leave much to be desired and are questions well worthy of the attention of those placed in authority over us. Municipal milk depôts, of which we have one excellent example in Dundee, do admirable work in providing a number of children with good milk and thus promote a thoroughly good social object—the physical well-being in early life of a portion of the next generation. But as they are not likely to meet more than a fraction of the demand the question may be fairly raised whether the energy so expended could not be better employed in a more effective control of the whole milk-supply of the district. And of course these depôts are open to the criticism which sound economists apply to all forms of municipal trading—namely, tendencies to extravagance, reactionary methods, want of enterprise, and bureaucracy.

Koch himself, in his Nobel lecture, published in THE LANCET of May 26th last, does not go nearly so far as some of his followers. He calls, it is true, for compulsory notification and other measures against open tuberculosis, but not at all against the closed form, which he regards as "quite harmless." Experience has led to the modification of some optimistic views as to the proportion of recoveries even under the most favourable conditions. We have long known that when all the climatic and hygienic advantages which wealth and leisure can procure are present recovery is slow and not always sure, and in the case of those less favourably situated it is still slower and still less sure. The latter form the class which will always constitute the overwhelming majority of those for whom public health administration is required.

Dr. R. S. Aitchison and Dr. Edward Carmichael have lately presented to the Edinburgh parish council a report showing that over 90 per cent. of the cases of this class under their care at Craiglockhart and Craigleith poorhouses are incurable, and their experience is to a certain extent corroborated by Dr. R. C. Macfie, who gives the results of treatment during his residence at the Sidlaw Sanatorium in THE LANCET of June 16th last (p. 1685) showing that even a small rise in the social conditions above the level of the poorest gives better hopes of recovery. We see constantly around us evidence that the law of inheritance by which the offspring of tuberculous parents are more liable to phthisis than the offspring of the non-tuberculous shows no signs of being abolished yet awhile, that as Dr. W. H. Dickinson happily puts it, "There is the soil as well as the seed," and that the parable of the sower is as true to-day as it was when it was spoken.

The whole case for notification lies in the preventive measures which ought to follow in its wake. On this the advocates of compulsory and the advocates of voluntary notification are agreed. Here they part. Those who favour the long reach of the secular arm hold that compulsion and efficiency will surely go together. They believe anything less than compulsory notification to be a makeshift and a sham, and they think no time ought to be lost in securing a system national, uniform, complete, and foreordained to success. The disciples of voluntaryism, on the other hand, remind us that compulsion has often brought its friends into strange and unexpected dilemmas which have led too late to the sorrowful conclusion that it is the first step that counts. They think it best to proceed cautiously, and they prefer to seek the coöperation of the patients and their friends in what is often a long-drawn-out business rather than to irritate them by coercive measures. They would give voluntary notification a fair chance. They point out that it presents no administrative difficulties and that it has worked well in several large English municipalities, and they are perhaps not far wrong in the belief that it will give local authorities quite enough to do for the present, while the public craving for sanitary improvements, coupled with a possible increase of rates, will be amply satisfied for some time to come. Finally, it may be well to remember that Sheffield is the only town which has so far got compulsory notification, and that for a period of five years, and that Dr. J. Robertson, the late medical officer of health there, now of Birmingham, has put the following opinion on record: "I should strongly deprecate powers being given to any sanitary authority who had not first acquired the machinery and experience derived from a system of voluntary notification."

You are aware that in the circular of March 10th last already alluded to it is left to each local authority to organise the plan considered most appropriate to local conditions, and I must say at once that the scheme recently submitted to the public health committee of the Dundee town council by Dr. Charles Templeman, our excellent medical officer of health, appears to me to be sound, practical, well adapted to our local requirements, and likely to go a long way towards mitigating the evils which we have been considering. His recommendations are threefold: (1) voluntary notification; (2) a central dispensary; and (3) provision for the isolation of advanced cases. With voluntary notification we have already dealt at sufficient length. A municipal dispensary with the medical officer of health at its head and coördinated with the admirable out-patient departments of the Dundee Royal Infirmary and the parish council would be a great step forward. It would be the centre from which patients could be guided as to their habits and mode of life, the depôt for the supply of medicines, sputum flasks, disinfectants, and Japanese paper handkerchiefs to the necessitous poor. It would be also the headquarters for the supervision of patients and for investigation of the conditions in which phthisis arises and recurs in houses and localities. For the idea of the municipal dispensary the world is indebted to Dr. R. W. Philip of Edinburgh. He organised the first dispensary of the kind in Edinburgh, a voluntary one, 20 years ago and he has worked it since then with conspicuous success. We are glad to have him with us to-day as our guest and we hope he may be long spared to continue the efforts which have already borne so much fruit. Mr Buist's last official act, before retiring from the chairman-ship of our infirmary board, was to express approval of Dr. Templeman's scheme and the desire of those connected with the infirmary to coöperate in carrying it out. In this beneficent coöperation his successor, Mr. Guthrie, and his fellow directors will not be found wanting. The isolation of patients who are in an advanced stage of the disease and whose homes are unsuitable would be a very obvious advantage to all concerned, patients, relatives, neighbours, and the community in which they live. To say nothing of the humanitarian aspect of the question, which is sufficiently clear to everyone, segregation will notably reduce the amount of infective material in any locality, and will therefore commend itself to the prudent, just as fire insurance companies desire the removal of as much combustible material as possible from the premises and the neighbourhoods in which they are financially concerned. Should the town council of Dundee decide on the adoption of Dr. Templeman's scheme I am sure we wish them all success and we can promise them that cordial coöperation which the medical profession has always most willingly extended to sanitary reform.

SCARLET FEVER.—Scarlet fever is still prevalent in many parts of the district round Manchester. At Hyde, some days since, there were 85 cases in the infectious hospital, the largest number on record. At Sandbach in Cheshire its spread is attributed to "gossiping mothers," a cause, it is to be feared, very difficult to remove. The medical officer of health of Gorton, Mr. A. W. Martin, has expressed the opinion that hospital isolation accomplishes very little and is not worth the tremendous expense involved. In his annual report he says that the hospital charges for the past year for scarlet fever amounted to £68. If, as in neighbouring townships, 80 per cent. of the patients had been removed to the hospital the bill would have been £1360. The council has acted on these views for 12 years, with the saving of more than £15,000 to the ratepayers, and, in Mr. Martin's opinion, "at the same time keeping a lower death-rate and a lower infection-rate from the disease as compared with similar districts removing a large percentage of their cases." This certainly speaks well for what may be called the medical discipline of Gorton.

ON THE X RAY SHADOWS OF CYSTIC AND XANTHIC OXIDE CALCULI.

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THERE seems to be a pretty general, though erroneous, impression that cystin and xanthin calculi give no shadow by the Roentgen test and that the x rays are therefore no aid in diagnosis where a calculus of either of these substances is present in the urinary tract.

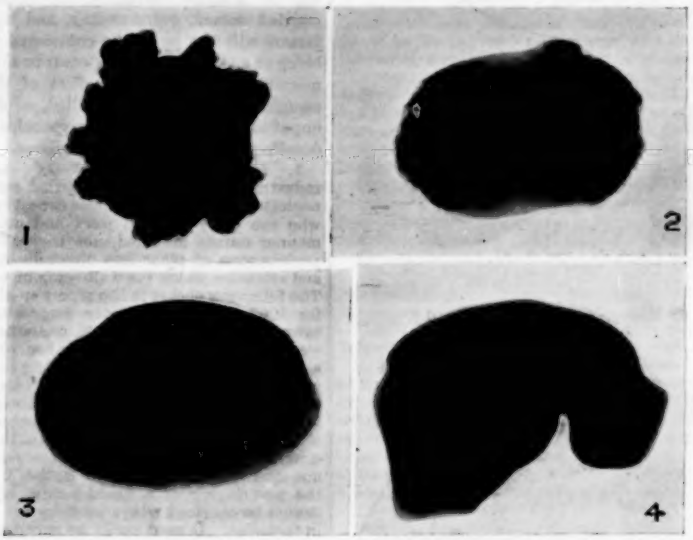
Recently I was asked by a well-known physician to see in consultation a young woman who was passing large quantities of cystin in her urine and whose symptoms pointed to the presence of renal calculus in one or other or both organs. Cystin had been passed in the urine of this patient for a long time and I was given to understand that one of her sisters had for five years at least been passing quantities of the same material and that the father of these young women had for a long period excreted cystin in his urine and was believed to have a renal calculus. I asked if a skiagram had been taken of the patient I had been called on to see, and the reply was that cystin calculi did not give a shadow and that this statement was made on the authority of an able pathologist at a well-known medical school. Recalling the fact related in an early paper on the shadows given by calculi, which I contributed some years ago to THE LANCET,[1] that a gall-stone gives a very faint shadow, probably due to the earthy phosphates and other lime salts, aided possibly by the traces of copper, iron, and manganese mixed with the cholestearine and found in nearly all gall-stones, I doubted the correctness of the authority.

Many cystin calculi contain phosphates of lime as well as traces of phosphates of magnesium and ammonium, but what is much more to the point, sulphur is present in all of them to the extent of 25·53 or 25·81 per cent. It was therefore *a priori* improbable that cystic oxide calculi could fail to give a very deep shadow and I at once took steps to ascertain what really was the result.

In the Museum of the Royal College of Surgeons of England I found 11 examples of cystic oxide calculi; one of them had been removed from the urethra; one from the kidney; one was a series of small calculi, varying in size from that of a pin's head to that of a pea, which had been voided at different times by a man, 40 years of age; and eight of the specimens had been obtained from human urinary bladders, six of these having been removed by operation during life. There is also in the Museum of the Royal College of Surgeons an admirable skiagram of one of these specimens taken before its removal by operation from the bladder of a boy, aged seven years. This specimen is marked "D 8" in the catalogue and consists of one-half of a large calculus which, together with the skiagram, was presented to the Museum by Mr. John Murray. The skiagram of the other half of this calculus, which is in the Museum of the Middlesex Hospital, is shown in Fig. 5 accompanying this paper. To settle the question as to whether the depth of this shadow was in any way due to the presence of phosphates Mr. S. G. Shattock was good enough to have an analysis of the calculus made by Dr. H. R. Le Sueur, who reported that it consisted almost entirely of cystin with the admixture of only 0·4 per cent. of inorganic residue, a very minute portion of which is iron.

Fig. 6 shows the shadow of a cystic oxide stone removed by Mr. N. C. McNamara by median lithotomy from a boy, aged two years and eight months. It was analysed at the time by Dr. Dupré who could detect nothing in its composition but cystin.

Fig. 4 shows the shadow of a calculus removed from the kidney of a patient by Mr. W. H. A. Jacobson. No analysis of its composition is, so far as I know, recorded, but it has all the characters of a stone composed exclusively of cystin. It must be well-nigh a unique specimen of a cystin renal calculus removed by operation. The specimen marked "D 6" in the catalogue of the College Museum is a large cystin calculus weighing 1050 grains, removed by Mr. Reginald Harrison from a young man, aged 21 years. It was analysed by Professor Campbell Brown and reported by him to consist of cystin with a small quantity of ammonio-magnesium phosphate and a trace of calcium phosphate.



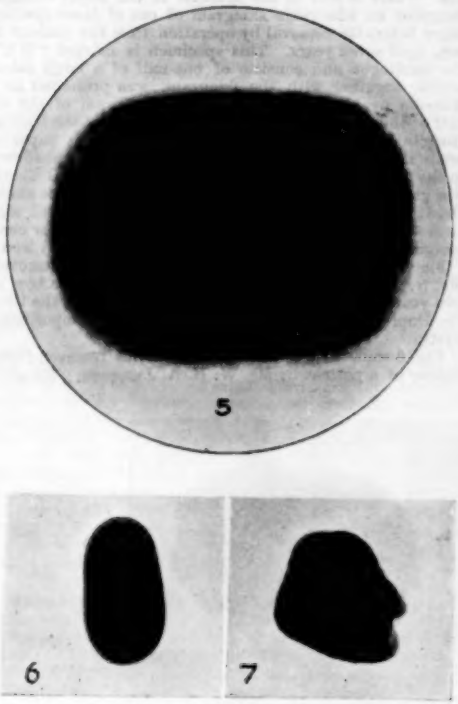
1. Oxalate of lime. 2. Cystin with phosphate of lime. 3. Cystin with phosphate of lime. 4. Cystin, D 9.

Fusible calculous matter covers some cystin and xanthin stones and oxalate of lime is sometimes mixed up in their substance. (See Figs. 2 and 3.) In the specimen marked "D. G. 1" from a youth, aged 19 years, there is seen a layer of calcium oxalate around the entire circumference of the stone at a distance of from one-sixth to one-third of an inch from its outer surface.

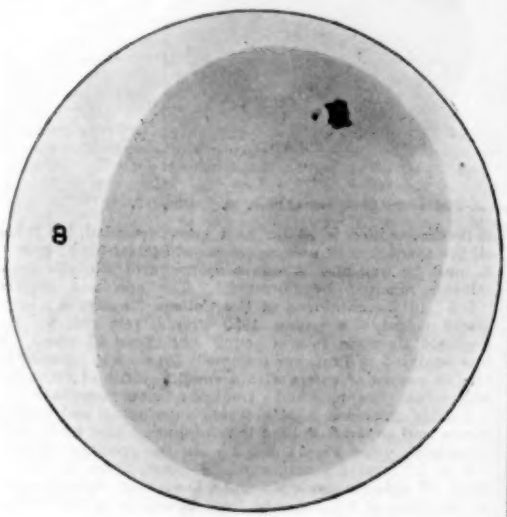
From the young woman whose case has given rise to these remarks, Mr. C. R. C. Lyster, the able electro-therapeutist of the Middlesex Hospital, obtained very marked shadows of a calculus in each kidney, but I am not aware of the verification of the composition of these calculi, nor even as to whether or not they have yet been removed from the patient.

[1] THE LANCET, Nov. 14th, 1896.

There are only four examples of xanthin calculi in the Museum of the Royal College of Surgeons. Three of them were removed, presumably, from urinary bladders; two of them certainly were from the bladders of Mussulman boys of four and five years of age respectively. The fourth xanthin stone was extracted per anum from a recto-vaginal fistula of a woman, aged 56 years, who had also a vesico-vaginal fistula, both fistulæ having followed a confinement 12 years before the extraction of the stone.



5. Cystin. Mr. Murray's specimen. 6. Cystin, D 8. 7. Xanthin.



The shadow of a uric acid calculus to show the slight intensity of shadow as compared with the shadows of cystin and xanthin.

I am indebted to Mr. Lyster for the photographs from which the accompanying illustrations are taken. Figs. 4, 6, and 7 are of specimens in the Hunterian Museum; Figs. 1, 2, 3, 5, and 6 are of specimens in the Middlesex Hospital Museum.

In talking with Dr. J. Mackenzie Davidson since these photographs were taken, on the subject of the shadows of cystin and xanthin, Dr. Davidson drew my attention to a recent paper of his own in which he gives illustrations of the shadows of two small cystin stones and remarks, "Even a cystic oxide calculus is fairly opaque owing to the sulphur atom weighing 32 in it."

Cavendish-square, W.

SOME SOCIAL FACTORS IN THE CAUSATION OF INFANTILE MORTALITY.[1]

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IT is proposed to discuss, as factors in the causation of infantile mortality, the industrial employment of married women, overcrowding, and high birth-rate. These factors will first be briefly considered separately, the object being to establish that each *tends* to a high rate of infantile mortality. Thereafter the effect of these three factors in complex operation will be studied, a method by which it is hoped to clear up certain discrepancies which the individual consideration of each factor discloses.

1. *Industrial employment of married women.*—The industrial employment of married women conduces to the neglect of infants. It is quite exceptional to find a woman who can carry on hard work and nourish her child in the manner nature intended, not to speak of the satisfactory performance of other less direct duties involved in the care and attention which the well-being of every infant demands. The following occurs in the report on the health of Burnley[2] for 1903: "Burnley is the largest textile manufacturing town in Europe—that is, it contains more looms for the weaving of cloth than any other town or city, and, as a larger number of women than men are employed in weaving, it follows that many infants are put out to nurse whilst the mothers are engaged in the weaving shed. When infants a few weeks old are thus put out into the hands of unskilful nurses it becomes certain that the food will be at times unsuitable, and the natural requirements of the infant not attended to. A sensible mother's care is necessary for the up-bringing of a healthy child, and this motherly care cannot be obtained where mothers are extensively employed in factories. It need excite no surprise, then, that in manufacturing towns the infantile mortality is large, very much greater than in non-textile towns where mothers usually nurse their own children, and are not compelled to put them out to nurse." Again, "I consider the factory life of mothers and the bad nursing of children to be the principal causes of this high infant mortality; surely Nature intended mothers to suckle their own infants." Greenwood's[3] observations in Blackburn lead to the same conclusion. He points out that employment conduces to neglect in different ways, but by far the most important is the absence of the mother from home and from the child, which involves artificial feeding. This, he concludes, may be called involuntary neglect, for in the main it is so, but it is sometimes deliberately increased. Reid[4] inquired into the mortality of children under one year of age, in three classes of artisan towns in Staffordshire, in relation to the employment of married women in factories. His statistics cover a period of 20 years and only towns of distinctly artisan population were included. In the first class were included towns with many married women engaged in work; the second class included towns with fewer married women engaged in work; and the third class included those towns

[1] Abstract of a thesis for the degree in medicine.
[2] Dean: Health Report of the County Borough of Burnley, 1903, pp. 5–6
[3] Greenwood: Annual Report upon the Health of Blackburn, 1904, p. 27.
[4] Reid: Brit. Med. Jour., 1901, vol. ii., p. 410.

in which practically no married women were engaged in work. The following table shows the infantile mortality of these three classes with the census population of 1901:—

—	Class 1. Many women engaged in work.	Class 2. Fewer women engaged in work.	Class 3. Practically no women engaged in work.
Census population 1901.	147,281	198 955	182.864
10 years 1881-90	195	166	152
10 years 1891-1900	211	177	167

This shows a very regular association of high infantile mortality and the industrial employment of married women. The figures are all the more valuable when one has regard to the fact that other general conditions were similar. Of the 15 county boroughs[5] of England and Wales in which the proportions of occupied females were 40 per cent. or more, Blackburn, Burnley, and Preston are not only the three with the highest percentage of occupied females but also have the highest percentage of married or widowed women employed. Thus at the census of 1901[6] Blackburn had 37·9 per cent. of its married or widowed females engaged in occupation, Burnley had 33·8 per cent., and Preston 30·5 per cent. These towns are invariably among the large towns with the highest infantile mortality-rates. The averages for the decennium 1893-1902 were: Blackburn, 199; Burnley, 210; and Preston, 232. It may therefore be fairly concluded that, *primâ facie*, the industrial employment of married women tends to a high rate of infantile mortality. Nevertheless, if Blackburn be compared with Salford, which has relatively fewer married women employed, their position as regards infantile mortality is reversed:—

Town.	Average infantile mortality, 1893-1902.[7]	Percentage of married or widowed females employed (census 1901).[8]
Salford	202	16·6
Blackburn	199	37·9

2. *Overcrowding* only too frequently sums up the factors of poverty, intemperance, crime, and domestic unhygiene. This cannot be better expressed than in the words of the Registrar-General:[9] "The direct consequences of close aggregation are probably as nothing in comparison with its indirect consequences or concomitants. The more crowded a community the greater, speaking generally, is the amount of abject want, of filth, of crime, of drunkenness, and of other excesses; the more keen is the competition, and the more feverish and exhausting the conditions of life. Moreover, and perhaps more than all, it is in these crowded communities that almost all the most dangerous and unhealthy industries are carried on. It is not so much the aggregation itself as these other factors which are associated with aggregation that produce the high mortality of our great towns, or other thickly populated areas." Newsholme[10] has shown that the true density that should be considered is the number of persons to each room, not the number of persons on a given area. The average density of London (1881-90) was 58 persons to an acre; the Peabody Buildings had an average density of 751 persons to an acre. Yet the average infantile mortality of the Peabody Buildings for the nine years 1882-90 was only 139 as compared with 152 for the whole of London. In the Peabody Buildings, however, the average number of persons to each room was only 1·8, which compared favourably with London as a whole. Sir Shirley F. Murphy has shown a very close connexion between overcrowding and infantile mortality. The following table[11] is given in the appendix to his evidence before the Inter-Departmental Committee on Physical Deterioration.

London Infantile Mortality, 1891-1900.

Proportion of total population living more than two in a room in tenements less than five rooms.	Deaths under one year of age. 1891-1900.	Deaths under one year of age per 1000 living 0-1.
Districts with under 10 per cent.	13,533	142
,, ,, 10-15 ,,	56,208	180
,, ,, 15-20 ,,	42,158	196
,, ,, 20-25 ,,	36,521	193
,, ,, 25-30 ,,	23,219	210
,, ,, 30-35 ,,	22,580	222
,, ,, over 35 ,,	16,800	223

The period of time covered is sufficiently long, and the numbers dealt with are sufficiently large, to yield trustworthy results. The nearer one can, so to speak, approach a factor, the more clearly will its tendency be apparent. This analysis gets very close to the factor of overcrowding and the association is almost absolutely regular, amounting, as it does, to a demonstration.

Of the county boroughs[12] of England and Wales the three with the greatest proportion of their population living under overcrowded conditions—the census standard is two persons to a room, anything over that is "overcrowding"—are Gateshead with 34·54 per cent., Newcastle-on-Tyne with 30·47 per cent., and Sunderland with 30·10 per cent. of the total population living under overcrowded conditions. The average infantile mortality of these three towns for the decennium 1893-1902 was: Gateshead, 174; Newcastle, 173; and Sunderland, 175. It may, therefore, fairly be concluded that overcrowding tends to high infantile mortality. If, however, Gateshead be compared with Leicester, which is comparatively free from overcrowding, the position of these towns as regards infantile mortality is reversed. Thus:—

Town.	Infantile mortality, 1893-1902.[13]	Per cent. total population overcrowded.[14]
Leicester	187	1·05
Gateshead	174	34·54

3. *High birth-rate.*—The birth-rate has to be looked upon as an index of social status. If the marriage-rates and the birth-rates of certain registration districts in London, selected on social grounds, be calculated for the year 1903, on the census population of 1901, the following result is obtained. The infant deaths per 1000 births in 1903 are also shown.[15]

Rate per 1000 persons living.	St George's, Hanover-square.	Kensington.	Hackney.	Stepney.	Whitechapel.
Marriage-rate ...	21·3	18·4	14·8	15·1	14·4
Birth-rate	17·5	20·3	26·9	32·3	36·3
Infantile mortality	141	145	128	208	194

I attach great importance to what I conceive to be the true relation between the birth-rate and infantile mortality. It is proposed to show that counties and towns in England and Wales, which have birth-rates *higher* than that in England and Wales, as a whole, have, as a rule, infantile mortality-rates which are *higher* than that in England and Wales as a whole; and, conversely, that counties and towns which have *lower* birth-rates have as a rule *lower* rates of infantile mortality. The necessity of having some standard by which to disclose the true relation between the birth-rate and infantile mortality rate can readily be understood, and

[5] Census Report, 1901, p. 80.
[6] Ibid., Table XXXI.
[7] From the Registrar-General's Summary for 1903, Table III.
[8] From Census Report, Table XXXI.
[9] Supplement to the Forty-fifth Annual Report of the Registrar-General, p. xxi.
[10] Newsholme: Vital Statistics, 1899, p. 165.
[11] Inter-Departmental Committee: Appendix to Report, p. 52.
[12] Census Report, 1901, Table XLII.
[13] Registrar-General's Summary for 1903, Table III.
[14] Census Report, 1901, Table XLII.
[15] Calculated from data in Sixty-sixth Annual Report of the Registrar-General and in Registrar-General's Summary, 1903.

that of England and Wales as a whole is the best that offers. In order to eliminate accidental variations, it is proposed to take for this inquiry the ten years 1893-1902. The following table[16] has reference to the registration counties of England and Wales. The five counties with the lowest average birth-rates and the five with the highest average birth-rates are compared with England and Wales as a whole. The corresponding average infantile mortality is shown.

Registration Counties in England and Wales.

County.	Average birth-rate, 1893-1902.	Average infantile mortality, 1893-1902.
Rutland	23·3	104
Sussex	23·6	116
Westmorland ...	24·0	102
Surrey	24·3	121
Dorset	24·7	101
England and Wales	29·4	152
Northumberland ...	32·3	162
South Wales	33·5	163
Staffordshire	34·2	169
Monmouthshire ...	34·4	150
Durham	35·6	167

The following table shows a similar analysis of the 33 great towns.[17] The five with the lowest birth-rates and the five with the highest have been selected :—

Town.	Average birth-rate, 1893-1902.[18]	Average infantile mortality, 1893-1902.[19]
Halifax	23·4	148
Huddersfield ...	23·6	146
Brighton	24·9	156
Bradford	25·3	168
Croydon	25·4	141
England and Wales	29·4	152
Salford	34·1	202
Cardiff	35·0	159
Sunderland	35·6	175
West Ham	35·7	169
Gateshead	36·1	174

If the several districts of any large town be analysed this close relation between birth-rate and infantile mortality is even more strikingly demonstrated. The birth-rate and the infantile mortality-rate will both be found to be lower among the well-to-do classes than among the less favoured classes. This has already been shown by the examination of certain districts in London selected on social grounds. For further illustration the towns of Huddersfield and Leeds have been examined and are here set forth. The lower birth-rates and lower infantile mortality-rates are found associated in the better-class districts and the reverse holds true of the poorer districts.

Huddersfield, 1893-1902.[20]

—	Mean population.	Birth-rate.	Infantile mortality.
District of Lindley	8,487	20·7	122
Huddersfield	95,175	23·6	146
Central district	24,616	24·2	169

Leeds, 1903.[21]

—	Population middle of 1903.	Birth-rate, 1903.	Infantile mortality, 1903.
District of Chapeltown ...	38,046	24·22	106
City of Leeds	443,569	29·40	153
District of South Leeds ...	34,474	36·62	184

It may, therefore, be concluded that relatively high birth-rates are, as a rule, associated with relatively high rates of infantile mortality. But of the large towns in England and Wales, in 1893-1902, West Ham had a birth-rate of 35·7 whilst that of Blackburn was only 28·8. Their infantile mortality figures are shown in the following table :—

Town.	Infantile mortality, 1893-1902.[22]	Birth-rate, 1893-1902.[23]
Blackburn	199	28·8
West Ham	169	35·7

Having now indicated the *tendency* of each of these three factors—namely, industrial employment of married women, overcrowding, and a high birth-rate—one is in a position to study them in complex operation. The following table is

Ten Towns with the Highest Average Infantile Mortality, 1893-1902.

Town.	Average infantile mortality, 1893-1902.[24]	Percentage of married or widowed females engaged in occupations.[25]	Percentage of total population living under overcrowded conditions.[26]	Average birth-rate, 1893-1902.[27]
Preston	232	30·5	2·64	32·3
Burnley	210	33·8	7·14	32·3
Salford	202	16·6	7·54	34·1
Blackburn... ...	199	37·9	3·92	28·8
Liverpool	189	14·5	7·94	33·9
Manchester ...	188	49 3	6·28	32·8
Wolverhampton	188	11·9	4·67	33·5
Birmingham ...	188	19·0	10·33	32·8
Leicester	187	25 2	1·05	30·9
Sheffield	186	11·0	9·50	33·6
Average... ...	198·9	21·9	6·10	32·5
England and Wales	152·2	13·2	8·20	29·4

Ten Towns with the Lowest Average Infantile Mortality, 1893-1902.

West Ham ...	169	9·4	9·27	35·7
Bradford	168	13·1	14·62	25·3
Swansea	165	8·7	5·57	32·4
Cardiff	159	8·4	2·92	35·0
Brighton	156	13·8	3·07	24·9
Derby	154	9·2	1·18	28·8
Halifax	148	12·4	14·49	23·4
Huddersfield ...	146	12·9	12·88	23·6
Bristol	144	15·9	3·55	28·6
Croydon	141	11·8	2·74	25·4
Average ...	155·0	12·56	7·02	28·3

[16] Compiled from Table II., Sixty-Sixth Annual Report of the Registrar-General.

[17] The 33 great towns are: London, Croydon, West Ham, Brighton, Portsmouth, Norwich, Plymouth, Bristol, Wolverhampton, Birmingham, Leicester, Nottingham, Liverpool, Manchester, Salford, Oldham, Bradford, Leeds, Sheffield, Hull, Sunderland, Gateshead, Newcastle-on-Tyne, Derby, Bolton, Birkenhead, Blackburn, Burnley, Preston, Huddersfield, Halifax, Cardiff, and Swansea.

[18] From figures furnished me by Dr. J. F. W. Tatham, General Register Office, London.

[19] From Table III., Registrar-General's Summary, 1903.

[20] Calculated from data in the Annual Report on the Health of Huddersfield, 1903.

[21] Calculated from data in the Annual Report on the Health of Leeds, 1903.

[22] Registrar-General's Summary, 1903.

[23] From figures furnished me by Dr. Tatham, General Register Office, London.

[24] From Registrar-General's Summary, 1903, Table III.

[25] From General Report on the Census, 1901, Table XXXI.

[26] Ibid., Table XLII.

[27] From figures furnished me by Dr. Tatham, of the General Register Office, Somerset House.

made up from the statistics respecting the 33 large towns in England and Wales. The selection is entirely ruled by the average infantile mortality-rates in the decennium 1893–1902. The ten towns with the highest average infantile mortality and the ten towns with the lowest average infantile mortality are shown, together with census data as to the percentage of married or widowed females engaged in occupation and the condition of each town as to overcrowding. The birth-rates in the decennium 1893–1902 are also given.

This is an attempt to measure, as it were, the intensity with which each separate factor acts and I think that it supports my hypothesis "that the position of each town is determined within small limits by the degree to which these three factors operate in any given instance." In other words, that the position of each town on either list is more or less what one would, having regard to the tendency of each factor, expect it to be. A few examples may be pointed out. It will be granted that the closer one town resembles another in one or two of the factors the more apparent will become the effect of the remaining factor or factors. Thus, Blackburn, according to its figures as to married women engaged in occupations, should have a higher infantile mortality than Preston, Burnley, or Salford—the lower birth-rate of Blackburn places it below. Burnley and Salford have about the same degree of overcrowding; the occupied married women figure of the latter should place it far below the former; but the birth-rate of Salford determines their relative positions. Liverpool and Manchester have three factors pretty much in common, yet the lesser degree of overcrowding in the latter, and its slightly lower birth-rate, give it at least as favourable a position in spite of having a larger proportion of married women engaged in occupation. If Leicester be compared with Burnley it is found that both birth-rates are high; but the Leicester figures for married women engaged in occupation, and its condition as to overcrowding, compare favourably with Burnley, and hence their relative positions. The effect of the high birth-rate and overcrowding in Sheffield is sufficient to give it an infantile mortality comparable to Leicester, although the latter has more than twice as many married women engaged in occupation as Sheffield has.

Taking the low mortality towns, it will be seen that Bradford, according to its figure for married women engaged in occupation, and on account of its overcrowding, should have a higher infantile mortality than West Ham; but the birth-rate places it below. Both Swansea and Cardiff, because of their favourable figures for married women engaged in occupation, and position as to overcrowding, should occupy better places than they do. Their birth-rates determine their position. Both Bradford and Halifax have about the same degree of overcrowding, but the more favourable figures for married women occupied and of birth-rate in the latter places it below. Bristol, on account of married women engaged in occupation, and relatively high-birth-rate, should compare unfavourably with Huddersfield as regards infantile mortality; but it is placed below the latter on account of its comparative immunity from overcrowding. The factors generally conspire to place Croydon in its favourable position. If Croydon be compared with Cardiff the effect of the lower birth-rate of the former is well brought out.

Excursions from one list to another all point to the same conclusion, that in the operation of these three factors the infantile mortality for the most part arises. West Ham and Liverpool have birth-rates and overcrowding fairly comparable. The position of West Ham is determined by having a lesser proportion of married women engaged in occupation. Leicester and Bristol are similarly placed both as regards birth-rate and degree of overcrowding. Bristol owes its more favourable infantile mortality to a less pronounced operation of the remaining factor. Blackburn and Derby have the same birth-rate. The other two factors are in favour of Derby and against Blackburn. The only discrepancy the table discloses is in the position of Preston and Burnley relative to each other. The averages are but an epitome of the teaching of the whole table.

The factors are mutually related to the infantile mortality; where one factor is low another may be high, and according to the separate degree with which these operate so is the infantile mortality determined. The effect of the rural element in the case of England and Wales, as a whole, is to give, as one would expect, a slightly better infantile mortality-rate than that for the low mortality towns.

Huddersfield.

—	Infantile mortality.	Percentage of married or widowed females engaged in occupations.	Percentage of total population living under overcrowded conditions.	Birth-rate.
High mortality towns	196·9	21·90	6·10	32·5
England and Wales	152·2	13·20	8·20	29·4
Low mortality towns	155·0	12·56	7·02	28·3

THE INFLUENCE OF AN EXCESSIVE MEAT DIET ON GROWTH AND NUTRITION.

BY D. CHALMERS WATSON, M.D. EDIN., F.R.C.P. EDIN.

IN a paper published in 1905[1] I drew attention to the increase that had taken place in the consumption of animal food in this country in the past 50 years. It was there pointed out that the amount of meat imported into this country had increased from three pounds per head per annum in 1853 to 50 pounds per head per annum in 1903—a very remarkable increase. A consideration of these figures suggests the question, What amount of animal proteid is requisite for the healthy nutrition of normal subjects? The results of Chittenden's recent researches on the amount of proteid requirements in health have clearly shown that in some important respects the teaching of the text-books on diet is erroneous and have shown the necessity of, in the words of a leading writer, reconsidering our conclusions on diet from their foundations. The necessity for such a re-investigation has further been demonstrated by the results of some preliminary observations on diet, investigated from a new standpoint, published by me in 1904–05, which showed that the administration of an excessive meat diet to normal animals was followed by striking histological changes in the thyroid gland. This evidence of structural change in the thyroid gland under a meat diet indicated the advisability of repeating the experiments on a larger scale. Accordingly, I have during the past year made an extensive series of observations on the influence of a meat diet on (*a*) the growth and general nutrition, and (*b*) the structure and functions of the organs of a large number of animals. The present paper deals with the former; it gives an account of the clinical results obtained by feeding rats on an exclusive flesh diet and also some comments on the bearing of these results on some clinical phenomena in the human subject. The diets employed were ox-flesh and horse-flesh, with bread and milk as the control diet. The chemical composition of these dietaries was determined by Dr. Andrew Hunter, assistant in the physiological laboratory of the University of Edinburgh, and is elsewhere given in detail.[2] The essential facts are summarised in the following table.

	Proteid.	Fat.	Carbohydrate.	Salts.
Ox-flesh	49	46	1·5	2·2
Horse-flesh	81	14	1·7	2·4
Bread and milk	18	4	73·1	3·9

Bread and milk is the diet in common use for tame rats and the control diet used in this experiment was found to be admirably adapted for the growth and nutrition of rats of all ages. In connexion with the experimental diets it may be mentioned that under certain conditions—e.g., in the neighbourhood of abattoirs—the diet of wild rats is mainly one of flesh food of different kinds. Some control observations were made on the influence of the two dietaries (horse-flesh and bread and milk) on wild rats. The effects of the diet were studied in animals of different ages as follows: (1) on very young rats newly weaned (three weeks old), the controls being taken from the same litter—25 rats with 19 controls; (2) on young rats, approximately two

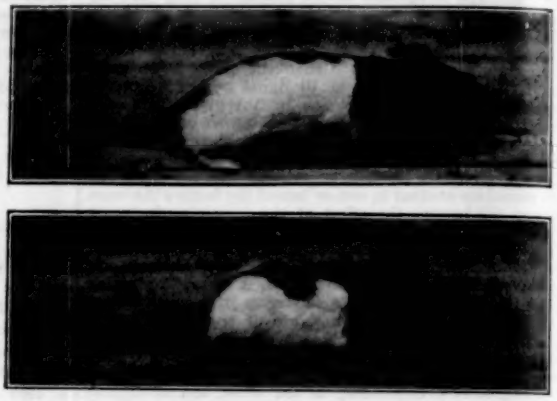
[1] Brit. Med. Jour., July 8th, 1905.
[2] Journal of Physiology, vol. xxxiv., No. 112.

and a half months old—22 rats with 12 controls; and (3) on full-grown adult rats—14 rats with 10 controls. In the investigations special attention was directed to the following points: (*a*) the effects of the diet on the growth and nutrition of the meat-fed animals; (*b*) the health of their offspring; and (*c*) the recuperative power of a normal diet in animals which had deteriorated as a result of the meat feeding.

Ox-flesh.—I. The effect of an ox-flesh diet on very young rats.—Fourteen young rats from five litters, newly weaned, were placed on an exclusively ox-flesh diet, 11 rats from the same litters being used as controls (bread and skim-milk diet). Five of the meat-fed animals succumbed within four months, their weights and date of death being indicated on Chart 1. The remaining nine animals lived and appeared to thrive, but they gained in weight less than did the controls. Two representative illustrations are given. These show the relative sizes of two male rats of the same litter after being fed for three months on bread and skim milk (Fig. 1*a*) and ox-flesh (Fig. 1*b*) respectively. The general appearance of these nine ox-flesh-fed subjects was in all respects normal; it was, however, observed that some of them moved about in a less lively manner than did normal animals. This lessened activity was associated with, and apparently dependent upon, changes in the osseous system of a rachitic-like nature which were revealed at the post-mortem examination. In the meat-fed animals (litters 4 and 5) four were females, and although kept with males none of them became pregnant, whereas of the three control females from the same litters all bore litters. These results admit of the following conclusions. 1. Very young rats, newly weaned, can in the majority of cases live and thrive on an exclusive ox-flesh diet; their growth is, however, retarded by this dietary. 2. An ox-flesh diet interferes with the development of pregnancy.

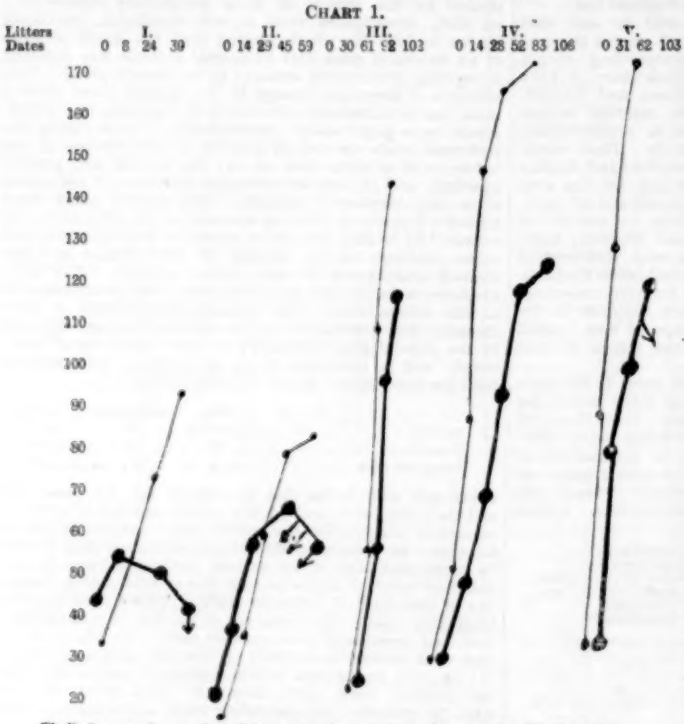
II. *The effect of an ox flesh diet on young rats from two and a half to three months old.*—Eight rats of an average weight of 65 grammes and approximately two and a half months old were fed on an exclusively ox-flesh diet, four subjects of similar age and weight being used as controls. The meat-fed animals thrived and were with one exception alive and in apparent health after six months of this feeding. They gained in weight more than the controls (see Chart 2). With the exception of four which became inordinarily fat, all the meat-fed subjects appeared to be in a perfect condition throughout the whole period of observation.

FIG. 1.



To show the relative size of two male rats of the same litter after being fed for three months on bread and skim-milk (*a*) and ox-flesh (*b*).

CHART 1.



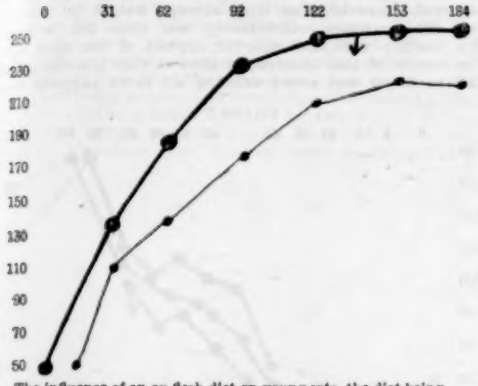
The influence of an ox-flesh diet on very young rats newly weaned. The dark line equals the average weight of the ox-flesh fed rats. The arrows indicate deaths. The faint line equals the average weight of the control (bread and milk-fed) subjects.

Horse flesh.—I. *The influence of a diet of horse flesh on very young rats.*—Eleven animals from five litters were fed on horse-flesh, eight rats from the same litters being used as controls (bread and skim-milk diet). Eight of the 11 meat-fed animals succumbed after a few weeks' diet; the remaining three died within four months. The control subjects lived and thrived. The weight curve of one meat-fed subject is not included in the chart. These results, which are graphically represented in Chart 3, show that a diet of horse-flesh arrests the growth of, and is speedily fatal to, very young rats.

II. *The influence of horse flesh on young rats approximately two and a half months old.*—Fourteen young rats about two and a half months old were placed on a meat diet, eight control animals of a similar age and weight being fed on bread and skim-milk. Six of the meat-fed subjects succumbed on the third day. On the morning of this day the rats appeared to be in their usual health. An hour after feeding one of them was lying on its side apparently unconscious. In a few minutes others were affected. They appeared to be paralysed. They felt cold to the touch, exhibited symptoms of tetany, and speedily became unconscious. Six succumbed within half an hour. Of the remainder some showed similar symptoms, although in a less degree, and they recovered when the diet was changed to bread and skim-milk. After two days of the normal diet

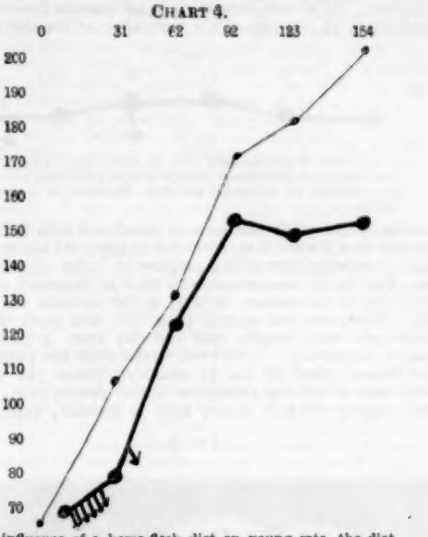
the remaining rats (five males and three females) were again placed on an exclusively horse-flesh diet. Under this regimen they now gained weight as shown in Chart 4. They exhibited symptoms of deranged nutrition such as accelerated and noisy respiration with tendency to "pot belly," but these symptoms were in the majority of animals recovered from. The females became pregnant and gave birth to four litters. At the end of the eighth month the animals were alive and in apparent good health, their average weight, however, being below the normal (Chart 4). The results of this observation may be summarised as follows. 1. An exclusive horse-flesh diet was fatal to about 50 per cent. of young rats two and a half months old, death occurring within a few days with symptoms of acute toxic poisoning. 2. In the remaining 50 per cent. the animals became accustomed to the diet and appeared to thrive on it, but their growth was permanently stunted, the maximum weight of the horse-flesh-fed being distinctly below the control bread and skim-milk-fed subjects. 3. The use of this diet in animals of this age appears not to affect the supervention of pregnancy.

CHART 2.



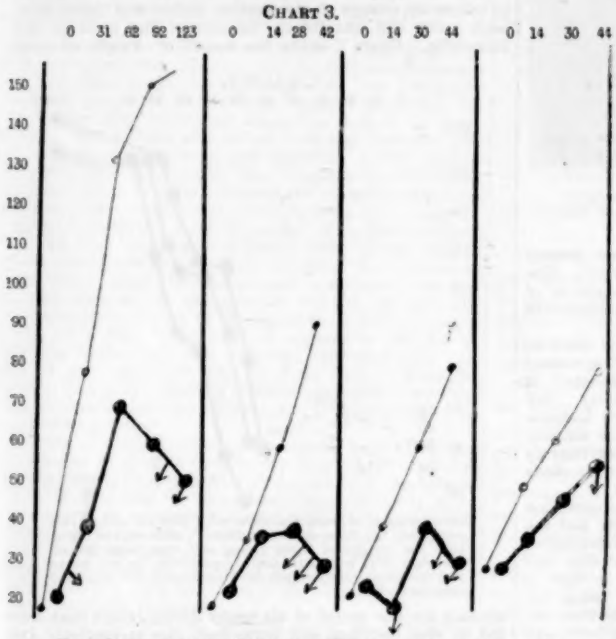
The influence of an ox-flesh diet on young rats, the diet being commenced when the animals were between two and three months old. The dark line equals the average of eight ox-flesh-fed rats. The arrow indicates a death. The faint line equals the average of four control (bread and milk-fed) subjects.

CHART 4.



The influence of a horse-flesh diet on young rats, the diet being commenced when the animals were between two and three months old. The dark line equals the average weight of 14 flesh-fed rats. The arrows indicate deaths. The faint line equals the average weight of eight control (bread and milk-fed) subjects.

CHART 3.



The influence of a horse-flesh diet on very young rats newly weaned. The dark lines equal the average weight of eleven horse-flesh fed rats. The arrows indicate deaths. The faint lines equal the average weight of eight control (bread and milk-fed) subjects.

III. *The effect of horse-flesh diet on adult rats.*—Nine adult rats of an average weight of 210 grammes were put on an exclusively horse-flesh diet on March 27th. On this diet their weight was well maintained (see Chart 5). Two succumbed in five months, the remainder being then in fair but by no means perfect condition, the most striking abnormality being the rough condition of the skin. In some cases the rate of respiration was increased, this symptom varying in severity from time to time. The general result of this observation shows that the exclusive horse-flesh diet maintains the body weight of adult rats in the majority of cases (seven out of nine); and also that the general nutrition of the flesh-fed animals was below that of the control bread and skim-milk-fed subjects.

The effects of a meat diet on pregnancy and lactation.—I have already submitted evidence bearing on this subject. It has been shown that when an ox-flesh diet is commenced at a very early period of life pregnancy does not supervene as in animals on a normal diet. Some further points of interest are supplied in the following record of one animal which had four litters in 1905. This animal, on a bread and skim-milk diet, had a litter of nine on April 22nd. This litter lived and thrived. After weaning the mother was transferred to an exclusively horse-flesh diet. Pregnancy supervened and a second litter, also of nine, was born on June 13th. None of the second litter survived longer than two months. The horse-flesh diet was continued and a third litter, six in number, was born on July 30th. These succumbed within one month. The mother was then transferred to the normal bread and skim-milk regimen, and while on this diet a fourth litter, eight in number, was born, all of which lived and thrived. In this and other meat-fed subjects it was

observed that the mammary glands were less developed than in bread and milk-fed rats.

The influence of a meat diet on the progeny.—The progeny of meat-fed rats are usually poorly developed and show a high mortality in early life. Some statistics on this point are given. Of 93 rats born of meat-fed parents (ox-flesh and horse-flesh) 19 (20 per cent.) were alive at the end of two

CHART 5.

The influence of a horse-flesh diet on adult rats. The dark line represents the average weight of nine adult rats fed for five months on a horse-flesh diet. The arrows indicate deaths.

months, while of 97 rats born of bread and milk-fed rats 82 (84 per cent.) were then alive and in apparent health. The state of development of the progeny of bread and milk-fed rats (Fig. 2*a*) in comparison with that of meat-fed subjects (Fig. 2*b*) is illustrated in Fig. 2 for animals six weeks old. The meat fed animal (Fig. 2*b*) was puny and ill-developed, with scanty hair and dry skin, a picture of general marasmus. It died two weeks after the photograph was taken. One of the 13 meat-fed litters (an ox-flesh litter) was a striking exception to the general rule. When two months old this litter, nine in number, appeared to

FIG. 2.

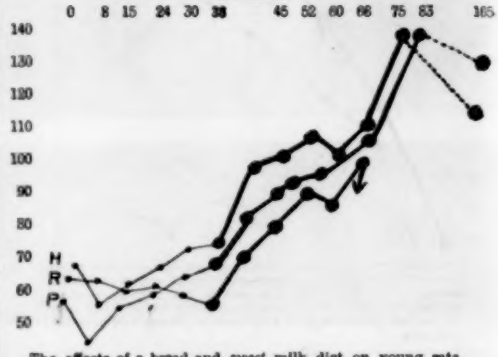
To show the state of development of the progeny of normally fed (bread and milk) rats (*a*) in comparison with rats of the same age bred on a flesh diet (*b*).

be in perfect health, their average weight and general appearance being quite up to the normal standard. The high mortality in early life of the second generation of meat-fed rats is probably due in great part to the defective power of lactation in the mothers.

The recuperative power of a normal diet.—Some observations were made on the recuperative power of a normal diet in animals which had deteriorated in consequence of having been fed for some time on an abnormal dietary. The results in the case of flesh-fed animals were in this instance controlled by comparison with those obtained from animals fed on (*a*) an exclusively rice diet, and (*b*) an exclusively porridge (made with milk) diet. Observations were made on animals of both the first and second generation.

A. In the first generation.—After the primary observation on each diet had been in progress for five weeks and the natural course of events in each group had been determined, an average representative of the rice-fed, flesh-fed, and porridge-fed animals was taken and put on a diet of bread and *sweet* milk, the amount of each being unrestricted. This was done on June 4th. At this time the animals showed marked evidence of retarded growth and a considerable degree of respiratory embarrassment. The change of diet was immediately followed by a marked increase in the rate of growth, this being pronounced in all three cases (see Chart 6). The improvement in the general condition of the animals was associated with an improvement in the respirations, which became less frequent, less noisy, and with fewer accompaniments. The subject which was originally fed on rice died after five weeks of the new diet; the other two were alive and in fair health in the middle of October. It has to be noted, however, that their average weight in October was 136 grammes, considerably less than the average of a healthy bread and milk-fed subject of the same age. The results of this observation showed that the change of diet to bread and sweet milk in all three subjects was

CHART 6.

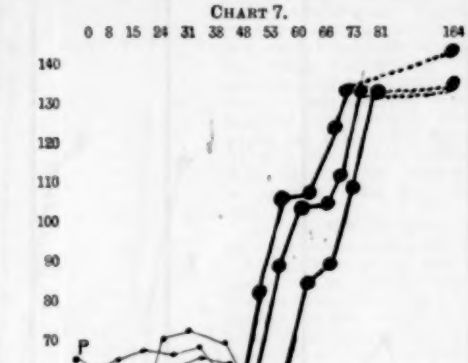


The effects of a bread and *sweet* milk diet on young rats previously fed on an abnormal dietary. The curves represent the weights of three young rats that were fed on porridge, rice, and horse-flesh respectively for five weeks and were then transferred on the thirty-eighth day to a bread and sweet milk diet.

followed by a rapid and marked improvement in the general condition and also by a marked improvement in respiration. The recovery from the respiratory embarrassment was, however, not complete. It also showed that the growth of the animals had been permanently stunted by the use of the abnormal diet in early life.

With the object of testing the immediate results observed to follow the change of diet another animal was taken from each group and was fed on the control diet of bread and skim-milk. Chart 7 shows the record of weight of these

CHART 7.



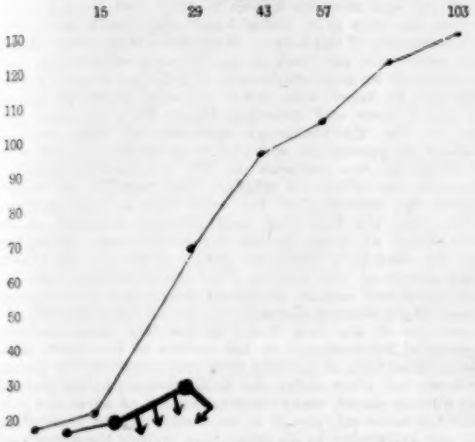
The influence of a bread and skim-milk diet on young rats previously fed on an abnormal dietary. The curves represent the weight of three young rats that were fed on porridge, rice, and horse-flesh respectively for six weeks and were then (forty-eighth day) transferred to a bread and skim-milk diet.

animals for the period of six weeks during which they were fed on rice, porridge, and horse-flesh diet respectively and thereafter on the control diet. The condition of the rice-fed subject when removed was such that our experience led us to believe that it could not live more than, at the outside,

one or two days longer on that diet. After the change of diet there was a rapid and immediate improvement in the condition of all three animals. The result was even more striking than in the case of the three animals the diet of which had been changed to bread and sweet milk (see chart). All three animals were alive and in fair condition in the middle of October, their average weight at that time (138 grammes) being, however, below the normal.

B. In the second generation.—The recuperative power in the second generation of meat-fed rats was tested in four animals taken from two litters, other four animals from the same litters being employed as controls. After weaning, the eight were kept on a horse-flesh diet for two weeks; in this period their weight was little more than maintained (see Chart 8). Two from each litter were then transferred to a

CHART 8.



Recuperative power in second generation of meat-fed rats. The faint line equals the average weight of four rats bred on an ox-flesh diet which were transferred to a bread and skim-milk diet at the age of six weeks. The dark line equals the average weight of four rats from the same litters which were not transferred but were kept on the meat diet.

bread and skim-milk dietary, the remaining four being kept on the horse flesh diet. All four meat-fed subjects succumbed in two to three weeks, the four transferred rats living and gaining in weight in the striking manner shown on the chart. The later history of these four rats is of great interest. The animals were killed when eight months old, their average weight being 150 grammes. Their health during the later months was very defective, the symptoms manifested being, in order of onset and severity (*a*) accelerated and noisy respirations, dry râles being audible a considerable distance from the hutch and (*b*) a dry condition of the skin with roughness and loss of hair. These clinical features considered alongside of the other facts recorded in this paper point to the general conclusion that the symptoms from which the animals suffered in later life were etiologically related to the use of the defective dietary in very early life. There can, it appears to me, be no reasonable doubt that the symptoms observed were the result of the premature loss of some vital function or functions, and more especially of those concerned in warding off bacterial infection from the respiratory, and probably also the alimentary, tract.

Summary of results.—These experiments prove that the excessive use of a meat diet in rats is attended with the following results: (1) growth is retarded; (2) sterility is induced if the diet is commenced in very early life; (3) the power of lactation is diminished; (4) a permanent weakening of the resisting power of the animals is induced by the use of an excessive meat diet in early life, the animals succumbing to disease at an unusually early age; and (5) there is a high death-rate in the offspring of animals fed on an excessive meat diet.

Commentary.—The facts recorded have an interesting bearing on the two questions of physical deterioration and high infantile mortality that are engaging medical attention at the present time. With regard to these conditions there is no doubt that not one but several factors are concerned in their production. There is equally little doubt that among these factors the question of diet occupies a foremost place. The defects in a diet may lie in one of several directions. The food may be of fair nutritive value but insufficient in amount; on the other hand, it may be of high nutritive value, excessive in amount, and of a nature which exercises an injurious effect on the organs and tissues. It is important that some light on this subject should be looked for from experimental medicine, and in view of the increasing prevalence of the consumption of animal food in this country it is of special importance to determine the effects on the organism of an excess of animal proteid food. The main interest of my experimental results lies in the clear evidence submitted that an excessive meat diet can itself induce in animals—whose dietetic habits are fairly akin to those of man—some of the most prominent symptoms of physical deterioration—viz., defective general physique, deficient power of lactation, diminished fertility, and a high infantile mortality. I believe that these symptoms are, to an important extent, comparable to those prevailing in the human subject at the present time, the symptoms in man having, however, been established in a more gradual manner, their onset being contributed to by the operation of other etiological factors.

Some points of practical importance are brought out in the record. Of these the most noteworthy is the importance of a proper dietary in very early life. My experiments showed that the use of an excessive meat *régime* in early life induced a serious and permanent weakness of the animals, which, however, remained for a long time latent after the substitution of a physiological dietary. Clinical experience has led me to think that we have here also a close parallel in diseases in the human subject, and more especially in the class of affections commonly included under the terms gout and goutiness. Be that as it may, the experimental results indicate the importance of directing particular attention to the early dietetic history of patients so far as these are obtainable. The necessity for this will be further emphasised by the subsequent records of the structural changes in the organs and tissues observed in the course of these experiments.

The experiments referred to in this paper were conducted in the physiological laboratory of the University of Edinburgh with the assistance of grants from the Moray fund of the University and the Carnegie trust, and I take this opportunity of expressing my great indebtedness to Professor Schäfer for invaluable assistance received throughout the investigation.

Edinburgh.

OUTBREAK OF PNEUMONIA IN A REFORMATORY SCHOOL.

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THE following notes are published in the hope that other physicians drawing their experience from a larger field may be induced to express their views upon some such similar outbreak with which they may have perchance been brought into contact. The outbreak to which I refer occurred fully four years ago. Although at the time I was much interested in the illness I have refrained from publishing the notes of the cases in the hope that some new circumstance might arise which would throw fresh light upon an epidemic of pneumonia that was as sudden in its onset as it was obscure in its causation. I have been informed that outbreaks of pneumonia have recently occurred in other reformatory schools in England and in Scotland, the origin and causation of which are equally mysterious.

Admittedly a microbial disease, pneumonia or pneumonic fever is not a pathological entity due to one and the same micro-organism. The malady owns many causes and yet while an attempt might be made to include under the term pneumonia only the croupous form of the disease, the result of a specific pneumococcus, and to regard all other forms as simply inflammation of the lungs, this would not advance our knowledge, for while the pneumococcus is without doubt the cause of pneumonia there are cases

of pneumonia in which this organism is not detected. Asthenic types of the disease are associated with a variety of micro-organisms. Croupous pneumonia, or that due to the pneumococcus of Fränkel, is usually preceded by a rigor, is attended by physical signs pointing to consolidation of lung, runs a definite course, and reaches a crisis within nine days, but it is seldom a disease that becomes epidemic. When it assumes this character it is more than likely that the malady is not due to the pneumococcus alone but to other micro-organisms as well, and therefore the result of a mixed infection.

The industrial school to which I was called by the visiting medical officer is in the neighbourhood of Newcastle-upon-Tyne. It has accommodation for 200 boys and is nearly always full. During the month of April of the particular year in question the only entries in the log-book were one case of Pott's fracture, one case of skin disease, and three cases of abscess. On May 17th two boys, aged 13 years respectively, were seized with pneumonia; five days later (May 22nd) other three boys, also aged about 13 years, were added to the list; ten days later (June 1st) a sixth case occurred in a boy 14 years of age; on June 5th two more cases in boys aged nine and 12 years respectively and on June 23rd the ninth case occurred. This boy, aged 15 years, had complained of headache in the afternoon but so slight did his ailment seem that it was not considered necessary by the governor to summon the medical officer. During the night the nurse, who was attending to some boys in the dormitory, gave him at his own request a drink of milk. A few hours later the lad was found dead in bed. On the following day I made a necropsy. The body was that of a well-nourished boy. Rigor mortis was passing off. There were no signs of external bruising. The pericardium contained a small quantity of free fluid. On the surface of the heart were numerous small petechial hæmorrhages. The heart itself was healthy. There was a small quantity of serous fluid in the left pleural cavity. The base of the left lung was adherent to the diaphragm. On section the lower lobe of the left lung was found to be the seat of the early stage of pneumonia. Beyond being slightly adherent to the diaphragm the right lung presented nothing abnormal. The stomach contained about two ounces of grumous fluid; its mucous membrane as well as that of the intestine was healthy. The liver was large but healthy. The spleen was very much enlarged and pulpy. The kidneys were congested. There were no enlarged glands in the mesentery and no signs of tubercle or of peritonitis. Beyond being paler on its surface than usual the brain presented nothing abnormal. The blood was extremely fluid. The opinion come to by the medical officer and myself was that the boy had died in collapse in the early stage of pneumonia. A bacteriological examination of the blood and fluids was unfortunately not made.

Looking back upon the history of the outbreak it will be observed that in all eight cases of pneumonia occurred between May 18th and June 5th—i.e., in 18 days—and that the ninth, the last and only fatal case, occurred 15 days later. In the expectoration of one of the first two boys who fell ill tubercle bacilli were found in the fourth week, yet this lad not only made a good recovery, but three years after the illness is reported to be quite well and strong and earning his living as a labourer at some iron works. In none of the other cases were tubercle bacilli found. The after-histories of these lads obtained four years subsequently are interesting. The youths are all quite well.

In their clinical aspects the illnesses were ordinary croupous pneumonia. There was nothing unusual or peculiar in the course they ran. In trying to determine the cause of the outbreak we were struck by the fact that most of the cases occurred in one large dormitory in which the sleeping accommodation was overcrowded and the ventilation of the room was defective. The window lighting of this ward, too, was deficient. A new range of windows was put in the blank wall. The other points were at once attended to. Since then not only have there been no fresh cases of pneumonia but the health of the boys has been remarkably good.

I am but giving expression to the opinion of my *confrères* when I say that it is no uncommon thing when pneumonia is prevalent in a town for the disease to break out and to linger in certain streets compared with others. A little while ago I was asked to see in consultation in a neighbouring town several cases of pneumonia in succession within the space of three weeks. Most of the cases occurred in one street in houses not far distant from each other, also in two or three adjacent streets. Similar outbreaks have occurred in institutions, such as schools, barracks, &c., and not a few of these have been traced to the escape of sewer air into the sleeping rooms. When several cases of pneumonia have thus occurred in close succession there has generally been overcrowding as well.

The fact that death occurred in the case above mentioned within 24 hours of the commencement of the illness rather removes the case from the category of ordinary pneumonia, for in croupous pneumonia it is rare for death to occur before the third or fourth day. Much depends in any case upon the virulence of the microbe and the resistance of the individual. Irritant gases when respired provoke acute bronchial and pulmonary congestion but non-irritant gases are not considered to have any such effect and yet I have found animals die from acute congestion of the lungs after the inhalation of carbon monoxide, which is not usually regarded as an irritant, and men are known to have died from a similar cause, the only gross lesion found after death being acute inflammation of the lungs. What there is in sewer air over and above the gas itself or combination of gases to cause pneumonia we need not discuss. It is for our present purpose enough to know that sewer air can cause pneumonia. Typhoid fever and intestinal toxins from improper food, as in the Middlesbrough epidemic of 1889, are also causes of pneumonia and so too is influenza. There was nothing in the outbreak at the reformatory school to suggest an influenzal origin. The rapidity of development, the crowding of the cases into a brief period of time, and the fact that most of them occurred in one dormitory, all point to the cause or causes having been in the dormitory itself, an opinion confirmed by the disappearance of the malady after the ventilation had been improved and certain structural alterations and rearrangement of the sleeping accommodation had been effected. The condition of the lung found in the boy, accompanied by petechial hæmorrhages on the surface of the heart, recalls some other form of toxæmia than that caused by the pneumococcus, but since under the term pneumonia are included, as already stated, many diseases, not all of them due to one and the same microbe, it is impossible in the present state of our knowledge to do other than include the above under the wide category of pneumonia.

Newcastle-upon-Tyne.

THE RADICAL CURE OF FEMORAL HERNIA.

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FOR some years past I have been practising the following operation for the cure of femoral hernia with, as far as can be ascertained, a uniformly successful result. One of the patients, a woman three months pregnant, had an irreducible rupture; she went to full term. The child is now three and a half years old and there has been no sign of a recurrence of the hernia. I have performed the operation upwards of 20 times; all the cases healed by first intention and caused no trouble whatever.

Method of operation.—A curved incision about one and a half or two inches long is made over the saphenous opening. The sac is isolated and more or less cleared of fat. If not already back the hernia is reduced. A slightly curved hernia director is now introduced up the crural canal in front of the sac and when its point is behind Poupart's ligament it is moved laterally so as for a short distance to strip off the peritoneum from the posterior surface of the transversalis fascia. The point of the director is now pushed farther upwards and tilted forwards so as to make the aponeurosis of the external oblique muscle project about half an inch above Poupart's ligament. A small transverse incision is now made through the aponeurosis, parallel to its fibres, on to the point of the director (Fig. 1), which is now pushed up through the opening. The latter is only just large enough to allow of this being done. A sinus forceps, Spencer Wells forceps, or small nasal polypus forceps—the last, being slightly curved, is more convenient—is now introduced through the opening,

FIG. 1.

An incision being made on to the point of a director which has been passed up the crural canal and its point tilted forwards about half an inch above Poupart's ligament.

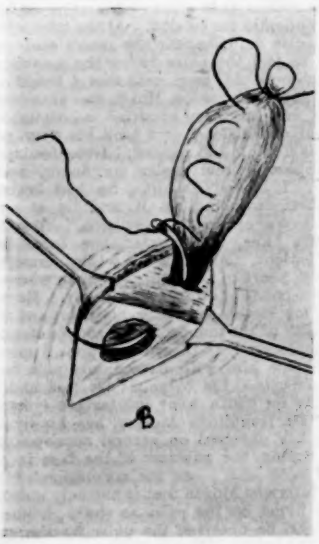
FIG. 2.

Sinus forceps passed through the opening above Poupart's ligament, behind the ligament, and through the saphenous opening, and made to grasp the fundus of the sac.

FIG. 3.

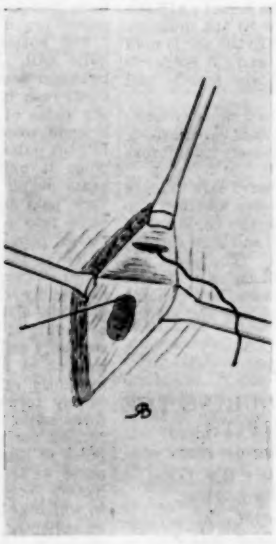
The sac pulled out through the opening above Poupart's ligament.

FIG 4.



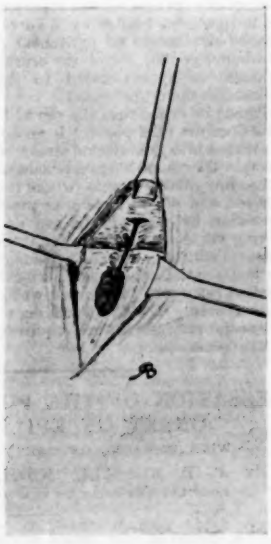
Needle threaded as described passed through the neck of the sac, through the opening above Poupart's ligament, across the transverse ramus of the pubes, through the pectineus muscle, and out through the saphenous opening.

FIG. 5.



The sac has been passed back through the opening above Poupart's ligament and rests behind the latter and the transversalis fascia.

FIG. 6.



The two ends of the thread are tied, fixing the sac in its place and obliterating the crural canal.

passed behind Poupart's ligament, and made to project from the saphenous opening; as this is done the director is withdrawn; in its descent it guides the forceps and prevents it from catching. The fundus of the sac is now seized by the forceps (Fig. 2), which is completely withdrawn, dragging the sac out through the opening in the external oblique aponeurosis (Fig. 3). The sac is now pulled out as much as possible and ligatured at the top of its neck. By this manœuvre no pouch is left in which recurrence may take place. A suture (silk, silkworm gut, and chromicised catgut have been used) is now passed through the fundus of the sac, the suture is drawn through to its middle and then tied, thus leaving two free ends of equal length, or this may be done before the sac is pulled up through the opening in Poupart's ligament, the thread being seized by the forceps and used to pull up the sac. But if the sac is large the thread may tear out and time be lost. One end is now threaded in a strong curved needle, one which will not rotate in the forceps which grasps it. The needle is now passed backwards and forwards through the sac several times, starting at the fundus and finishing at the neck, as described by Macewen for puckering the sac. The needle is now grasped in forceps, or a needle on a handle may be used, and its point is passed through the hole above Poupart's ligament, through the neck of the sac, down to the transverse ramus of the pubes, then by a turn of the wrist the point is made to slide forwards across the pubic bone, as close to it as possible, then to pierce the pectineus muscle and to appear through the inner part of the saphenous opening (Fig. 4). The needle is pulled through, bringing its thread with it. By drawing on the thread and by tucking the sac back again through the hole above Poupart's ligament by means of a stout probe or similar blunt instrument the sac disappears from view and comes to rest in a puckered-up condition behind the transversalis fascia and at the top of the crural canal, which it effectually roofs in. By this time the other end of the thread is hanging out of the hole above Poupart's ligament (Fig. 5). It is tied fairly firmly, but not too tightly, to the thread which projects from the saphenous opening; this fixes the sac in its place and fixes Poupart's ligament to the pectineus muscle, so obliterating the crural canal (Fig. 6). If necessary a second suture may be put in for this purpose but nearer the pubic spine. A suture is now put in to close the hole above Poupart's ligament and the skin incision is closed. Thus there are three distinct checks against the recurrence of the hernia: (1) the sac is ligatured higher up than is possible by the ordinary method and leaves no peritoneal pouch; (2) the sac is used as a buffer or roof above the crural canal; and (3) Poupart's ligament is approximated to the pectineus muscle and obliterates the crural canal.

It may be urged that the sac will slough and cause trouble. This does not take place. It no doubt becomes vascularised, converted into granulation tissue, and ultimately into fibrous tissue. Of course asepsis is necessary.

In strangulated hernia, where it has appeared safe to leave the sac and where time was precious, I have modified the operation by pushing the sac up through the canal, after having made a little space for it as before, and then sutured Poupart's ligament to the pectineus muscle. The result was perfectly satisfactory; but this method is not such a guarantee against relapse as the former, which I believe to be a genuine radical cure. The operation does not take long and no new or special instruments are required.

Manchester-square, W.

CESSATION OF THE PULSE DURING THE ONSET OF EPILEPTIC FITS,

WITH REMARKS ON THE MECHANISM OF FITS.

BY A. E. RUSSELL, M.D. LOND., M.R.C.P. LOND.,
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THE following case seems worthy of record, inasmuch as it is in accord with other cases which led many years ago to the enunciation of an explanation of the mechanism of epileptic fits which has, however, of late years fallen into discredit.

The patient was a man, aged 21 years. He had suffered from epileptic fits all his life. A maternal aunt had also been subject to fits all her life. The patient's fits commenced with an aura which was referred to by him as an indescribable sensation in his navel. As he experienced a well-marked aura he was given some capsules of amyl nitrite with instructions to break one and inhale it when he perceived the aura. This he was in time to do on one occasion and affirmed most positively that it warded off the fit. The majority of his fits occurred in bed at night; sometimes in his waking moments. Any emotional excitement was very apt to precipitate a fit. On April 21st he developed a fit in the out-patient room. He uttered a cry and was seen to be rubbing his hands together. His pulse was immediately examined for but was not palpable. He was just commencing the stage of tonic spasm when the wrist was seized. This tonic spasm lasted for about three-quarters of a minute, perhaps a minute. Dr. E. W. Hedley, who examined the other wrist also corroborates the absence of the pulse during the tonic phase. It was not easy to determine exactly when the pulse returned but we feel certain that the pulse did not return until the clonic phase. At first it was feeble but as the fit subsided it became fuller and stronger.

Dr. W. T. Harris of Chiswick has kindly told me of another case which occurred in his practice. A man came to have a tooth extracted. While applying the forceps the patient's head suddenly fell back and his face turned exceedingly pale. On feeling for his pulse Dr. Harris found it to be absent. Thinking that it was a severe syncopal attack he attempted to give the patient some sal-volatile but clonic convulsions intervened. These were slight and very transient, consciousness being regained almost immediately. Within a few minutes, however, the patient again turned very pale and became unconscious with tonic spasm. Dr. Harris again noted complete absence of the radial pulse, but at the commencement of the clonic stage a feeble pulse appeared at the wrist which gradually improved as the fit subsided. On questioning the patient he acknowledged having had two previous epileptic fits.

Remarks.—Cessation of the pulse preceding the onset of an epileptic fit has been noticed before. Thus Moxon[1] when examining a patient with cardiac dropsy notes: "I was feeling his pulse carefully; the beats were regular and of moderate strength.....I missed one, then another beat, and then found the pulse to have stopped so entirely that it made me look up suddenly at the man to see what was the matter. His face had become very pale, his head was turned towards his left shoulder, and the lip and cheek were twitching; the spasms then affected his arms, and he passed into a severe epileptic convulsion. At the time when I first noticed the pulse to disappear the man's arm was quite still. I tried to feel the pulse during the convulsion but there was so much muscular movement that I could not distinguish it." On another occasion Moxon was examining the pulse of a man who had been admitted to hospital for uræmic vomiting and convulsions. "I took his wrist and felt his pulse; it was forcible and regular. I was feeling it when it quite disappeared from under my finger, many beats being missed. I looked at him; he had become very pale in the face, twitching set it, and he at once went into a very severe epileptic convulsion." Moxon's house physician, Mr. Lane, corroborated the same fact twice on the same patient. Moxon noted a third example. "I was examining the heart of a young gentleman who was asking my advice on account of attacks of epilepsy. He was standing and I had my stethoscope over his heart and was attending to the quality of the sounds. These sounds stopped suddenly and so completely that in great surprise I moved to look at him and saw him with exceedingly pale face, evidently quite unconscious, his balance just lost and he falling forwards. He forthwith went into severe epileptiform convulsions. Dr. Hughlings Jackson has kindly informed me that he has observed on several occasions the pulse to disappear during the paleness of the face in the onset of attacks of *petit mal*." At the conclusion of his lecture Dr. Southey informed Moxon that in the only instance in which he had his finger on the pulse at the beginning of an epileptic convulsion he observed the pulse to disappear during the onset of the attack. Moxon further remarks that "I have found the pulse present again when the clonic spasms have just commenced." He attributed the cessation of the heart to the action of the pneumogastric nerve but recognised the fact that the cause of this pneumogastric

[1] MOXON: On the Influence of the Circulation on the Nervous System, THE LANCET, April 23rd, 1881, p. 648.

impulse was yet to seek. Hilton Fagge[2] records a similar case. He was listening to the heart of an epileptic when it ceased to beat and the man fell back. Presently it recommenced to beat and then there was a little twitching of his hands.

Other similar cases are on record. Hare in his recent work[3] has revived the old idea that epilepsy is due to cerebral anæmia and has propounded the following statement as representing the sequence of events in the genesis of a fit: "I shall assume provisionally that in epilepsy, as in most of the paroxysmal neuroses, there is a widespread area of vaso-constriction tending to cause a rise in the general blood pressure; that this vaso-constriction whether because it is sudden or because it is very extensive leaves no time or room for adequate compensation by an area of vaso-dilation; and that consequently cardiac inhibition through the vagus is demanded to check the continuous rise in the general blood pressure so induced. So is occasioned a grave modification of the heart beat of the nature of slowing and weakening, amounting, perhaps, quite often to actual cessation. In this way are produced a more or less sudden fall in the blood pressure and a more or less sudden anæmia of the brain; and this is the proximate factor of the unconsciousness and of the convulsions. Synchronous with the initial rise of blood pressure are the various premonitory symptoms or aurae of the fit; synchronous with the sudden fall in blood pressure is the commencement of the unconsciousness and of the tonic muscular spasm; synchronous with the recommencing or accelerating heart beats and the consequent progressive recovery of the blood pressure is the relaxation of the tonic spasm and its substitution by intermittent or clonic convulsions presenting progressively widening intervals. As the blood pressure continues to rise the clonic convulsions become less and less frequent and finally cease."

It is perfectly true that such cardiac arrest is not a constant phenomenon in epilepsy. It is well known that the pulse may be maintained in fair volume throughout the whole fit and Gowers[4] states: "The pulse may be feeble at the onset but I have never noted an actual initial failure. It is generally unaffected at the commencement. A tracing published by Voisin shows that the heart's action may be perfectly normal during the stage of aura." But it is very possible that cardiac arrest in the onset of an epileptic fit may be much commoner than is suspected. It is obviously a matter of some difficulty to make observations as it is usually impossible to predict when a fit is likely to occur.

The phenomenon merits greater consideration than it has received. It is clear that cardiac arrest may precede the development of the fit and it is also well known that stoppage of the heart for a sufficient period will give rise to attacks of unconsciousness and convulsions, the so-called Stokes-Adams syndrome. A most remarkable case has been published by Webster,[5] of a man, aged 48 years, whose heart would intermit for periods varying from 10 to 20 seconds. The features observed in one of these periods of intermission were that so soon as the pulse became suspended the face became rapidly and extremely pale; later, after some 15 seconds of absence of pulse spasmodic twitchings of the muscles of the face were observed; as the period lengthened still further the spasmodic movements extended to the muscles of the neck and ultimately the arms and legs took part in the convulsive movements. During the more severe crises either concomitant squint of both eyes or conjugate deviation to either side was observed and the pupils became widely dilated. Respiration was noisy, with considerable puffing out of the cheeks, and froth appeared at the mouth. During the greater part of the period the patient was quite unconscious. Flushing of the face and return of consciousness were always almost simultaneous with the appearance of the pulse at the radial artery, the pulse being felt slightly before the flushing of the face was observed. Webster's paper is accompanied by a series of 60 beautiful sphygmograms which establish beyond question that the arrest of the heart preceded the epileptiform attack. Another very instructive case has been published by J. M. Finny.[6]

The efficacy of cerebral anæmia as a means of producing unconsciousness and convulsions scarcely requires mention. The well-known experiments of Kussmaul and Tenner and the effects of a rapid and severe hæmorrhage in man may be just mentioned. No cause could be more potent than a sudden cessation of the beating of the heart for the production of an anæmia not only of the brain but of the medulla, cord, and entire body. It would account for the unconsciousness and it is beyond dispute that it can produce convulsions; it would act as the "physiological fulminate" of Hughlings Jackson.

Sudden cessation of the heart can certainly cause tonic spasm, as recorded in a case of sudden death due to vagus inhibition of the heart reported by me.[7] The clonic spasms are more difficult of explanation. According to Hare they may be due to the return of the blood to the brain and in this connexion a case reported by W. Broadbent[8] is worthy of note. The patient was a woman, aged 44 years, with double mitral disease, who for seven years had been subject to epileptic fits. One evening "she was sitting talking to her daughter when she was suddenly unable to speak plainly and became rigid preparatory to a fit. Her daughter stated that instead of the usual fit there was irregular jerking of the right arm and leg and the mouth was drawn over to the right, but she says the head was turned to the left; the left arm and the left leg remained absolutely passive. She passed water during the fit." She was unconscious for five hours after the fit and was then found to have left hemiplegia and hemianæsthesia. Death occurred on the ninth day. Post mortem, in the right middle cerebral artery just beyond the point of origin a small embolus was found with a distal thrombus for half an inch. There was extreme softening both of the cortex and of the basal ganglia of the right side of the brain.

The case is recorded as one of cerebral embolism occurring just at the commencement of an epileptic fit; but whether that was so or whether the embolus initiated the attack is difficult of proof. Cerebral embolism is not infrequently associated with convulsions and occurring in an epileptic it would presumably be still more likely to precipitate a fit. If in this particular patient the fits were associated with cardiac arrest, the extremely interesting point arises that the embolus would prevent any return of blood to the right side of the brain. The case therefore affords support to the theory that the clonic convulsions are due to the returning blood flow.

The fact that a powerful mechanism for producing cardiac inhibition does exist in the vagus nerve and in its connexions would be sufficient to account for the cardiac arrest that occurs in certain cases of epilepsy. If such mechanism were unduly sensitive or if the ordinary causes which induce vagus inhibition of the heart (such as a rise in blood pressure) were either abnormal or excessive, then cardiac inhibition might occur with undue ease and frequency. It might be urged that stoppage of the heart is a serious event and that if it occurred frequently there would be some probability of its bringing about the death of the patient. But it is a fundamental physiological fact that under experimental stimulation of the vagus there is a practically irresistible tendency for the heart to recommence beating, even during the stimulation—the so-called vagus escape of the heart. This vagus escape of the heart would account for the recovery from the fits. It is not contended that vagus inhibition of the heart occurs as an initial factor in every epileptic fit. Any cause competent to produce a sudden or rapid cerebral anæmia might be equally efficient and in this connexion it may be remembered that vaso-constriction of the cerebral arteries has been advanced in the past as the cause of epilepsy. This hypothesis has been discredited but the recent demonstration of nerve fibres in the cerebral vessels and other evidence of vaso-motor activity in the brain give considerable food for thought.

The phenomena of Raynaud's disease find adequate explanation in extreme vaso-constriction occurring in the affected parts. The cerebral complications which occasionally occur are explicable on the grounds that a similar constriction occurs in the cerebral vessels. Thus Osler[9] records the case of a woman, aged 48 years, who was subject

[2] Fagge and Pye-Smith: Text-book of Medicine, second edition, 1888, p. 793.

[3] The Food Factor in Disease, 1905, p. 331.

[4] Gowers: Epilepsy, second edition, 1901.

[5] Cardiac Arrhythmia in Relation to Cerebral Anæmia and Epileptiform Crises, Glasgow Hospital Reports, 1901.

[6] Bradycardia with Arrhythmia and Epileptiform Seizures, Brit. Med. Jour., April 28th, 1906, p. 967.

[7] On Death Occurring during or after Exploratory Puncture of Lung, St. Thomas's Hospital Reports, vol. xxviii., 1899.

[8] Cerebral Embolus during an Epileptic Fit, Brain, vol. xxvi., 1903, p. 447.

[9] The Cerebral Complications of Raynaud's Disease, American Journal of Medical Sciences, vol. cxii., 1896, p. 522.

to the ordinary phenomena of Raynaud's disease but in addition she had three attacks of aphasia with partial right hemiplegia occurring with the attacks of Raynaud's disease and one of left-sided weakness. These were transient and in each case followed by perfect recovery. That the retinal artery may be narrowed with impairment of vision is also known to occur in Raynaud's disease. Such phenomena strongly favour the view that the cerebral arteries, like those in other situations, are subject to variations in their calibre. It is very interesting, moreover, to note that Raynaud's disease is apt to be associated with epileptic fits and, indeed, Monro [10] states that 5 per cent. of cases of Raynaud's disease have suffered from convulsions at some time or other and several very striking cases of the association are on record. Thomas and Osler [11] record the case of a man whose attacks of Raynaud's disease were associated with severe epileptic attacks. The sequence of events was as follows. Firstly, the fingers became cold, white and dead, and the nails blue, associated with considerable pain. Then followed general chilliness with cold feet. These premonitory symptoms lasted for five minutes and were succeeded by unconsciousness and convulsions lasting for half an hour. In this case there was, firstly, the arterial spasm leading to the local syncope of the fingers; and secondly, general chilliness probably to be attributed to a general cutaneous vaso-constriction. The resulting rise of blood pressure on Hare's hypothesis would be the factor determining the vagus inhibition of the heart. The convulsions might also be explained by a vaso-constriction affecting the cerebral vessels, the occurrence of which in cases of Raynaud's disease has been suggested above. Other cases illustrating the association of epilepsy and Raynaud's disease are also on record. Harvey Cushing [12] notes that, "contrary to the positive statements of many, substances like epinephrin will blanch the pial vessels over the area of its application, as will occasionally a jet of cold water against the brain or the faradic current used for cortical stimulation."

This short paper has been written to point out that cardiac arrest does occur in some cases of epilepsy and to suggest that such arrest may be far commoner than is suspected. If observations were made on the pulse at the onset of fits by those whose work brings them into contact with epileptic patients in considerable numbers it would soon be established whether such cardiac arrest be of occasional or of frequent occurrence. Sudden cerebral anæmia due to cardiac inhibition (or to cerebral vaso-motor spasm) would account for most of the symptoms of an epileptic fit and it is suggested that the recovery from the fits finds adequate explanation in the well-known physiological fact—the vagus escape of the heart. Certain morbid changes have been described in the brains of epileptics but it is at least possible that they may be secondary to the repeated attacks of transient cerebral anæmia which must follow cardiac arrest and to the extreme congestion of the brain that the convulsive movements give rise to. Even if cardiac arrest can be proved to have no etiological influence in the mechanism of an attack it is worthy of study and is a symptom of great clinical importance, but it would be singular if a condition which in itself is competent to produce an epileptic fit were merely a side issue in the course of an attack.

Wimpole-street, W.

[10] Raynaud's Disease, 1899, p. 151.
[11] A Case of Raynaud's Disease associated with Convulsions and Hæmoglobinuria, Johns Hopkins Hospital Reports, 1891, p. 114.
[12] Some Experimental and Clinical Observations concerning States of Increased Intracranial Tension, American Journal of Medical Sciences, 1902, p. 400.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—The following scholarships, medals, and prizes have been awarded at St. Bartholomew's Medical School: The Lawrence scholarship and gold medal in medicine, surgery, and midwifery (value £45) to G. C. E. Simpson. The Brackenbury scholarship in medicine (value £39) to P. L. Giuseppi and J. K. Willis (equal). The Brackenbury scholarship in surgery (value £39) to R. H. Bott. The Matthews Duncan prize in midwifery to D. W. Hume. The Burrows prize in pathology to P. L. Giuseppi. The Skynner prize in morbid anatomy in reference to scarlet and rheumatic fevers to E. E. Cockayne. The Willett medal for operative surgery to J. C. Mead. The Wix prize for an essay on the Life and Works of Sir William Savory to K. Macfarlane Walker. The Shuter scholarship in anatomy and physiology (value £50) to H. T. H. Butt of Christ's College, Cambridge

NOTES OF TWO CASES OF AMPUTATION OF THE SHOULDER-GIRDLE.[1]

BY J. CRAWFORD RENTON, M.D. EDIN.,
SURGEON AND LECTURER ON CLINICAL SURGERY AT THE WESTERN INFIRMARY, GLASGOW; EXAMINER IN SURGERY AND CLINICAL SURGERY IN THE UNIVERSITY OF ABERDEEN.

CASE 1.—The patient, a man, aged 40 years, was sent to me by Dr. A. N. Montgomery and was admitted to the Western Infirmary in December, 1900, suffering from an ulcer over the right forearm. There was a history of syphilis and the patient stated that he had had a nodule on the arm for 14 years. A portion of the ulcer was removed and was found on examination by Dr. A. R. Ferguson to be an epithelioma. His arm was amputated in the middle of the upper arm. In April, 1903, the disease recurred in the stump. The rest of the arm was disarticulated at the shoulder-joint and the growth was then found to look like a spindle-celled sarcoma, which is a point of considerable interest and which will be referred to later. On Feb. 10th, 1906, the patient returned with a recurrence, the whole stump and axilla being occupied by a very large tumour. Removal of the tumour was recommended and on the 19th the clavicle was divided at its inner third, the subclavian artery and vein were tied, and the tumour along with the scapula and two-thirds of the clavicle and an additional growth on the side of the chest were removed. By adopting this method, recommended by Berger, there was practically almost no bleeding, a few intercostal branches being easily secured as they were divided. The patient suffered from very little shock and made an excellent recovery. Stereoscopic photographs showed the condition previously to, and after, operation, as also the appearance of the patient with an artificial arm applied.

Report by Dr. M. LOGAN TAYLOR.—On dissection of the stump, which was removed along with the scapula and the outer half of the clavicle, a large tumour mass is found occupying the original position of the head of the humerus and extending down the axillary border of the scapula to its inferior angle. In this tumour mass are involved practically all the muscles about the shoulder-joint, the deltoid especially being inseparable from it. The cut ends of the axillary vessels and of the brachial plexus of nerves run right into the centre of the growth. Microscopical examination of this second recurrence shows it to be a carcinoma. At first sight it has not got just the typical appearance of a squamous-celled epithelioma, but closer examination of the tumour cells shows them to be undoubtedly epithelial cells of the squamous type. The stroma is very well developed; alveoli are numerous and are filled with epithelial cells which in many instances are undergoing mucoid degeneration.

The primary growth was reported by Dr. Ferguson as being a squamous epithelioma, the first recurrence by Dr. J. H. Teacher (April, 1903) as being a spindle-celled sarcoma, though he was aware at the time of the primary growth being a cancer, and now this second recurrence turns out to be epithelioma. Unfortunately the sections of the previous growths have not been kept, so it is impossible to refer to them now. Dr. Teacher thinks that the first recurrence may have been a cancer after all but closely simulating a sarcoma.

CASE 2.—The patient, a woman, aged 60 years, was sent to me by Dr. M. T. Mackenzie of Scolpaig and was admitted to the Western Infirmary on Feb. 23rd, 1906. Two years ago she had hysterectomy performed for uterine fibroid by Professor Murdoch Cameron. She now suffered from a large tumour involving the upper part of the right humerus which was broken. The circumference of the arm was 14½ inches, as compared with 12 inches on the opposite side. The tumour had extended so much into the axilla and had pushed up the supraclavicular space that anything short of a shoulder girdle amputation was impossible. This was carried out exactly as is above described. There was very little shock and the patient went home on March 19th.

Report by Dr. TAYLOR.—The growth in the humerus is a large one, measuring 6 × 3½ × 3 inches. It extends from the anatomical neck of the humerus to the middle of the shaft. It is now impossible to say whether it has been originally a

[1] A paper read before the Glasgow Pathological and Clinical Society.

central or a periosteal growth for the tumour has completely replaced the shaft in the part affected. The articular surface of the head of the bone is seen at the upper end of the tumour but it is comparatively loose and could be easily torn away from the growth. The distal half of the humerus after removal of all the muscles was found to be attached to the lower end of the growth quite loosely by some tumour tissue. The muscles about the shoulder were adherent to the growth but were involved to a slight degree only. Microscopical examination shows the growth to be a sarcoma of the mixed-cell type, the majority of the cells being small round ones; the others are short spindles.

Remarks.—The two cases above described were operated on within ten days of each other and they illustrate the great value of Berger's amputation. By carrying out his method the mortality is practically the same as amputation at the shoulder-joint, which is extremely small. There was no special difficulty with either operation except in the woman, where it was a little more troublesome to expose the subclavian artery and vein owing to her stoutness and the size of the tumour. I have great pleasure in strongly recommending the operation.

Glasgow.

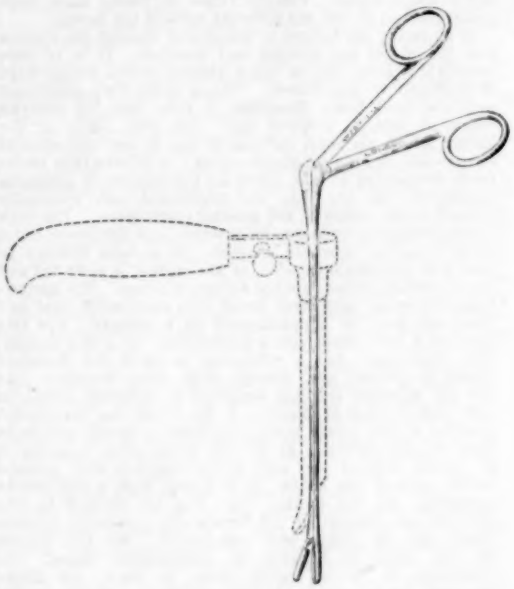
THE OPERATIVE TREATMENT OF LARYNGEAL PAPILLOMATA IN CHILDREN.

BY D. R. PATERSON, M.D. EDIN.,
SURGEON TO THE EAR, NOSE, AND THROAT DEPARTMENT, CARDIFF INFIRMARY.

THE frequency with which papers appear upon this subject is an indication of the difficulties which surround it and of the unsatisfactory nature of the results. Its importance, however, should not be under estimated as the frequent recurrence of these growths, even after what appears to be complete removal, is a constant menace to the life of the child. Of the three methods of treatment generally practised the operation of thyrotomy has been advocated on the ground that it permits of a more thorough clearance of the larynx. It exposes the parts completely and enables the operator to curette away all the affected tissue. Many objections have, however, been urged against it. Apart from the ordinary risks incidental to external cutting operations on the air passages, which are by no means insignificant, injury to the voice has resulted in not a few instances. Moreover, it does not guard against recurrence, however completely it may be done, and repetition of the operation may be necessary. Many cases are recorded of recurrence after thyrotomy and in one instance this operation was performed on a child as many as 17 times within two years.

Another mode of treatment—the performance of tracheotomy—is often a matter of urgency. Some authorities advise postponing any operation until the patient is older, unless, of course, obstruction of breathing supervenes. Insertion of a cannula in the trachea insures rest to the glottis for a prolonged period and has been followed by good results in many cases. It is necessary, however, to retain the tube for a considerable time, from 18 months to two years, and this cannot be regarded as a measure without some risk. I have on one occasion seen disappearance of the papillomata after a tube had been worn for that period but in others it had to be supplemented by the third or endolaryngeal method. This procedure, which is the one usually adopted by laryngologists, is an attempt to remove the growths by the natural passages. In order to control it, the use of the laryngoscope is necessary but the difficulties with this instrument in young children are so great that it is sometimes impossible even to get a satisfactory view of the larynx. For some years I used this method in the manner generally adopted, with the child under a general anæsthetic combined with local anæsthesia. The little patient, placed sitting in the nurse's lap, has chloroform administered in that position. Several assistants are required. A solution of cocaine brushed on the pharynx and larynx enables the instruments to be used without exciting reflex action, but great difficulty is experienced in keeping the part free from the copious secretion of mucus. I generally employed Mackenzie's spoon-blade forceps and for the smaller pieces Schroeter's instrument which could be moulded to fit into recesses. This procedure is of course very difficult to carry out in young children and in many cases it is impossible to thoroughly clear the larynx. Still, in a few cases excellent results were obtained, but the difficulty of clearing the anterior commissure and subglottic space is so great that recurrence is frequent and the operation has to be repeated. Some operators abandon the laryngoscope and are content to be guided solely by the sense of touch. Here the patient is placed on the back on a table under a general anæsthetic, but even with guarded instruments this procedure is not without risk of damaging the larynx. I have several times adopted it but have rarely succeeded in effecting a good clearance. Though these difficulties stand in the way of the general adoption of the endolaryngeal method there is no question that it should be tried in the first instance as it involves less risk to life and to the voice. This can be more strongly urged at the present time as the drawbacks I have enumerated are almost entirely got rid of by employing the direct method of examining the larynx. The ease with which the larynx can now be brought under inspection and the excellent view of the field of operation which may be obtained have much simplified endolaryngeal procedure and rendered it more effective. The advantages of this method are great and it is the purpose of this short paper to draw attention to them as illustrated by my own experience.

The introduction in 1895 by Kirstein of the autoscope marked a real advance in the direct examination of the larynx. His "universal spatula" I found very serviceable for inspection of the larynx though the amount of pressure that had to be exerted in order to depress the tongue made it in certain cases difficult to manipulate. To overcome this



Killian employed a tube spatula and this improvement has greatly simplified the procedure and rendered it easier to carry out.

The instruments required for the removal of papillomata by the direct method are a fish-tail tube spatula with handle attached and a straight forceps. The best form of illumination is the Kirstein electric head lamp which has very good illuminating power. The operating table should be of sufficient height to enable the operator when seated on a low chair to work conveniently. If the table be too low he has to assume a cramped uncomfortable position in which the light is uncertain and the instruments are difficult to manage with ease and precision. The patient should be placed on the back with the head hanging over the end of the table and a low pillow under the shoulders. Chloroform is the most suitable anæsthetic to administer and full anæsthesia can be easily kept up from a Junker's inhaler with the mouth-tube hooked round the angle of the mouth. The

pharynx is brushed lightly with a 10 per cent. solution of cocaine, the tube spatula is introduced, and through it the entrance of the larynx and the under surface of the epiglottis are similarly brushed. A few drops of adrenalin may be added to the cocaine solution as it prolongs the anæsthesia and prevents hæmorrhage during the operation. The difficulty with the mucous secretion is comparatively slight in this position as it drains into the most dependent part of the pharynx. Very little chloroform is required to maintain the general anæsthesia, a matter of some comfort to the operator as the expired chloroform coming out in a jet through the tube spatula impinges on his eye, causing smarting and interfering with the proper view of the parts. In the introduction of the spatula its point is passed along the under surface of the epiglottis and then tilted upwards so that it carries that structure forwards and enables an admirable view of the larynx to be obtained. In the majority of cases even this is not necessary. Placing the fish-tail end of the spatula on the base of the tongue immediately in front of the epiglottis and exerting pressure forwards is quite sufficient to bring the interior of the larynx into full view, and the whole of the operation can be carried out with the spatula in that position. For the removal of the papillomata I have employed various forms of forceps and after several trials I have had constructed by Messrs. Mayer and Meltzer one that I find very serviceable (*vide* illustration). It is a forceps with a straight shank fashioned on the crocodile principle and terminating in a beak with cutting edges. From the bend on the shank to the tip the length is nearly eight inches. It is used through the tube spatula and is lightly built so as to interfere with the view as little as possible. At the same time it is capable of dealing with fairly tough tissue. Various forms of beaks have been constructed to fit into the different parts of the larynx.

In operating the forceps is introduced through the spatula and the pieces are grasped and removed. If it is done rapidly the larynx can be fairly cleared before hæmorrhage shows itself to any extent. This is never very prominent and the head being dependent it runs into the pharynx where it can be mopped up. The two parts of the larynx which are most difficult to get at are the anterior commissure and the subglottic space. It is here that recurrence is most apt to take place, as the removal is generally imperfect. In one case the recurrence was eventually limited to the region of the anterior commissure. The beak of the straight forceps can be inserted into this space and a more complete clearance effected. It is more difficult to deal with the subglottic area, as the surface is more flat and the projecting masses are not so easy to grasp. The narrow-beaked forceps have been found very serviceable here and their use may be supplemented by a curette. For this purpose I have employed a modification of Löri's curette. This instrument has a receptacle to catch the detached pieces of growth and prevent their being aspirated into the air passages and has terminals of different calibre to suit various sizes of larynx. I have had the instrument adapted to the direct method by using a shank similar to that of the forceps. As it cuts from below upwards it is passed beyond the part to be removed and, pressed firmly against the tissue, it is drawn with a firm stroke upwards. As the cutting edge can be adapted to any part of the interior of the larynx any remaining papillomata can be dealt with effectually. As the larynx of the child is capable of considerable lateral displacement it is of much help to have the organ steadied from outside by an assistant. Much greater pressure can then be exerted, notably where the papillomata are sessile and tough. The endolaryngeal operation carried out by the direct method has given such excellent results that I have no hesitation in urging its adoption in the first instance in all cases of laryngeal papillomata. Where recurrence takes place soon and is persistent I would advise in addition the wearing of a tracheotomy tube for a time. This has a distinctly good effect in retarding the growth and enables the operator to deal more thoroughly with the papillomata at each sitting.

Cardiff.

PAIGNTON (DEVON) COTTAGE HOSPITAL.—The committee of the Paignton Cottage Hospital has decided to erect a new operating theatre and to provide extra accommodation for the administrative block. The cost of the undertaking has been estimated at £1172 and the work is to be commenced shortly.

A CASE OF CONGENITAL ABNORMALITY OF THE GENITO-URINARY ORGANS.

BY G. F. DARWALL SMITH, M.B., B.CH. OXON., F.R.C.S. ENG.,
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AND
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REGISTRAR TO THE GENERAL LYING-IN HOSPITAL.

THE following case seems sufficiently uncommon to deserve publication.

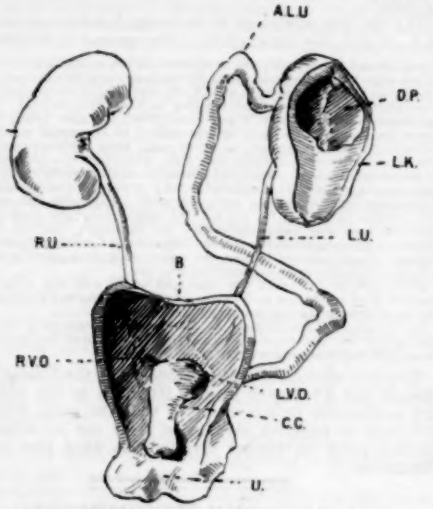
Clinical description.—The patient, a female infant, was first seen by one of us on Oct. 6th, 1905. She was then five days old. Her mother had been attended at her confinement by a very experienced and highly skilled midwife who is an inspector of midwives under the Central Midwives Board. This midwife reported that at birth the child presented no external abnormality and that the labour had been normal in every respect but that on the fourth day the condition immediately to be described was first seen. On the fifth day when seen by one of us this condition was as follows. A dark red globular swelling of the size of a walnut was protruding from the vulva. On its surface were a few darker hæmorrhagic patches and a little blood was oozing from it. The swelling was thoroughly bathed with boric acid lotion and was examined further under full antiseptic precautions. It was then found to be protruding from the urethra. The orifice of the vagina, which appeared quite normal, was posterior to it and behind this again there was slight prolapse of the rectal mucous membrane. The swelling felt cystic and rather thin-walled but was not particularly tense. It did not seem to be tender when handled gently and gave no impulse to the hand when the child cried. On the right side near its base one ureteric orifice could be seen from which a little urine spurted gently at intervals. The left side showed more congestion than the right but no ureteric orifice could be found here, although urine appeared to well up on this side also. The swelling was not at all tightly gripped by the urethral orifice. Several attempts were then made to compress and reduce the swelling back through the urethra with the fingers but as these were unsuccessful a blunt probe was used very gently to push it up by degrees, starting from its base. On one occasion while this was being done, in spite of great gentleness the probe felt as though it had pierced the wall of the swelling; there was, however, no gush of fluid from the puncture (if puncture there was) nor was there any appreciable decrease in size of the protrusion. However, after this the probe was laid aside and replacement was finally effected by passing the whole of the little finger up the urethra, through which the finger passed with extraordinary ease. The reduction did not seem to cause any pain. The child appeared perfectly well and there was no history that she had been ailing in any way. Neither abdominal nor rectal examination disclosed anything abnormal and no cause for straining could be discovered elsewhere.

The diagnosis seemed to lie between inversion of the whole bladder wall, inversion of the mucous membrane of the bladder, and prolapse of a "ureteric cyst," together with part of the bladder. Inversion of the whole bladder wall seemed improbable owing to the apparent thinness of the walls of the swelling and owing to the absence of any impulse on crying, while the absence of any discoverable ureteric orifice on the left side seemed to point to some possible connexion between the swelling and the left ureter. The swelling had not the funnel-shaped appearance which is described as being characteristic of prolapse of the ureter. As the child appeared perfectly well it seemed best to watch the case for the present. Accordingly a pad of aseptic wool was applied to the vulva, cleansing of the vulva with boric acid lotion at frequent intervals was ordered, and dilute boric acid ointment was applied to the skin in the neighbourhood.

It may be mentioned that the child had two elder brothers who were said to be normal in every respect and her parents similarly denied any abnormality of their persons. During the night of Oct. 6th the swelling again came down but was much smaller than before. It was also now rather darker in colour and quite flaccid. There was no sign of any sloughing or infection of its surface. It was replaced as before. During the next 24 hours it was replaced three times but each time that it came down it was smaller than when last seen. The child remained quite happy and well.

On the 8th the swelling only appeared once and was distinctly smaller. It did not appear again until the 10th, when it was only of about the size of a large pea. On the 13th it appeared and was replaced for the last time, and on this occasion it was noticed that the vesical sphincter was distinctly tighter than it had been hitherto. The child throughout seemed very well and contented and between the 8th and 14th had gained six and a half ounces in weight, in spite of a change from the breast to bottle feeding. On the 15th she suddenly had a convulsion during which she died. The cause of the convulsion was not obvious.

Pathological description.—A necropsy was performed about 12 hours after death. Rigor mortis was fairly well marked. Post-mortem hypostatic congestion was present over the most dependent parts. The buttocks were not sore. The hands were tightly clenched and the lips were almost black.



Semi-diagrammatic representation of the parts in a case of congenital abnormality of the genito-urinary organs. B., Bladder. U., Urethra. R.K., Right kidney. R.U., Right ureter. R.V.O., Vesical orifice of right ureter. A.L.U., Accessory left ureter. D.P., Dilated pelvis to left accessory ureter. L.K., Left kidney. L.U., Left ureter. L.V.O., Vesical orifice of left ureter. C.C., Collapsed ureteric cyst.

The general appearance of the cadaver was strongly suggestive of death from asphyxia. The body was rather small but well nourished and the amount of subcutaneous fat was normal. An incision was made in the middle line from the chin to a little above the umbilicus. Thence it was carried slightly on the left to the pubes so as to avoid injury to the urachus.

The thorax: There was no fluid in either pleural cavity. Scattered over the surface of each lung were a few small subpleural hæmorrhages, varying in size from that of a pin's head to that of a millet seed. On section the lungs were found to be normal, except that they were rather engorged. There was no excess of fluid in the pericardium. Scattered over the surface of the heart were a few subpericardial hæmorrhages similar to those found on the lungs. In other respects the heart was normal. The thymus seemed rather smaller than usual. The larynx, trachea, and bronchi were normal.

The abdomen: There was no fluid in the peritoneal cavity. The liver was normal. The spleen was rather smaller than usual but was otherwise normal. The pelvic colon entered the pelvis on the right side, its usual situation being occupied by a coiled tube similar in size and appearance to the rectum but obviously having no connexion with the intestine. The ovaries and Fallopian tubes were lying on the dorsal abdominal wall, reaching as high up as, and intimately attached to, the inferior end of either kidney. On the left side of the abdomen beneath the peritoneum was a tortuous tube very similar in size and appearance to the colon, for which it was at first sight mistaken. This, however, on further dissection was found to be a very much dilated accessory ureter. The whole length of the intestine from the stomach to the end of the rectum was removed. It was found to be normal. The pelvis was split through the symphysis and the two halves were widely separated. The vagina, rectum, bladder, uterus, Fallopian tubes, ovaries, ureters, and kidneys were removed *en masse*. The brain also was examined but nothing abnormal was found.

Detailed description of the genito-urinary organs.—The right kidney was normal in size and appearance; on section it presented no abnormality. The right ureter was normal and measured two and a half inches in length. The ovaries and Fallopian tubes, which were lying on the dorsal abdominal wall, were attached to the perinephritic tissue at the lower end of the kidneys. The left kidney was slightly larger than the right. Scattered over its surface at the upper end were a few small, tense cysts. Two ureters arose from the hilum (see figure), the lower one being normal, the upper and larger one arising from a largely dilated pelvis, distinct from the pelvis belonging to the lower ureter. On section the upper end of the left kidney was found to be completely occupied by the dilated end of the accessory ureter with the exception of the thinned-out cortex, which measured no more than one-eighth of an inch in thickness. The wall of this dilatation was quite smooth and showed no trace of pyramids nor of the openings of the ducts of Bellini to the naked eye. The accessory ureter and its dilated upper end were filled with a pale yellowish and slightly opalescent fluid. The smaller and lower left ureter opened into the lower end of the kidney in a normal manner. The pelvis was small and had about a dozen pyramids projecting into it. The smaller left ureter measured three inches in length and was therefore slightly longer than its fellow of the opposite side. Its diameter was approximately the same as that of the right ureter. The accessory and upper left ureter, which was extremely tortuous, measured six and a quarter inches in length and seven-twelfths of an inch in diameter when flattened out. Where it passed through the bladder wall it was much constricted. It entered the bladder below the opening of the smaller left ureter which opened at the upper limit of the wall of what was apparently a collapsed cyst formed by the lower end of the accessory ureter. The bladder was slightly larger than normal and at the fundus presented no obvious abnormality except that the mucous membrane had a few hæmorrhagic spots upon its surface. Projecting from the left side of the region of the trigone was a pink, thin-walled, pear-shaped, and collapsed cyst, the apex of which passed out through the urethra and probably terminated originally at the vulva in the cystic swelling described above. A fine probe could be passed with difficulty from the interior of the cyst through the constricted part of the ureter which lay in the bladder wall into the dilated accessory ureter above. The smaller left ureter opened at the upper limit of the cyst wall close to its origin from the bladder wall and very near to that margin which was nearest to the middle line of the body. The opening of the right ureter was situated on the posterior bladder wall on a level with the upper border of the cyst and slightly to the right of it. The urethra was dilated but was otherwise normal. The uterus was normal. The ovaries and Fallopian tubes were normal except as regards their position and attachments on the posterior abdominal wall. The vagina and the labia minora and majora were all normal. Microscopic examination of part of the cyst wall showed normal transitional epithelium on its vesical surface and very much thinned and flattened epithelium of the same character on its ureteric surface. Between these two layers of epithelium was some very vascular connective tissue which did not appear to contain any muscle fibres.

Remarks.—In the light of the necropsy it seems probable that this was a case of a dilated accessory ureter either with a blind cystic ending in the bladder wall or with ballooning of its lower end due to congenital narrowing of its orifice. Which of the two it really was it does not seem possible to say now. The treatment pursued in this particular case was dictated by the marked and progressive decrease in size of the protruded swelling and by the total absence of any morbid signs or symptoms exhibited by the child with the exception of the protrusion. Had the condition of the accessory left ureter been ascertained before death, doubtless it would have been better to have made a free communication between the bladder and the cyst, but even as it was the cyst apparently collapsed and the ureter did not, so that probably that treatment would have failed also. It is noteworthy that the thin-walled, pearl-grey appearance of the swelling, which is said to be present often in the case of these so called ureteric cysts, was entirely absent in this case.

MICROSCOPICAL AND CHEMICAL OBSERVATIONS ON A CASE OF SCLEREMA NEONATORUM.[1]

BY GEORGE CARPENTER, M.D LOND., M.R.C.P. LOND.,
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AND

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ASSISTANT PHYSICIAN TO THE NORTH-EASTERN HOSPITAL FOR CHILDREN.

THIS disease is not often met with, and less often in England than on the continent. Its favourite localities appear to be in Italy and France. It has been confounded in text-books with œdema neonatorum but it is quite distinct and there is no difficulty in diagnosing between the two. There are nevertheless two disorders, differing at any rate in degree, which both go under this name. The first, by far the commoner in this country, attacks otherwise healthy children of normal term at birth and is practically confined to the skin and the subjacent structures, usually ending in recovery at about six months; while the second, which is more usually found on the continent, attacks weaklings often of premature birth, and is a severe malady with serious constitutional symptoms of the alimentary and respiratory systems as well as of the kidney and is very fatal.[2] The case about to be described is of the first-mentioned order.

The patient was admitted to hospital on Dec. 30th, 1905, being six weeks old, well nourished, with normal temperature, and in fact normal in every way except for the induration of the skin on the posterior aspect of the body. The skin so affected was of a pink, purplish appearance and of a less even outline than usual, having some well-marked dimples and rounded but slight eminences. On applying pressure with the finger and then removing it no pitting occurred, but the colour faded to white and slowly returned as the effect of the finger pressure passed off. When the skin was pinched up between the finger and thumb the underlying tissue being closely adherent appeared when doubled together to keep the fingers more than one inch apart and gave a sensation as if a layer of indiarubber were adherent to the under surface of the skin. This kind of induration extended all over the back and buttocks, the back of the neck and lower part of the back of the scalp, the back of the arms and deltoid regions, and the back of the thighs. In the last-mentioned region it tapered to a point just above the back of the knee in a very characteristic way. The edges of the indurated areas terminated by gradually thinning. Later these signs extended slowly and to a less degree to the angles of the jaws, the sides of the neck, down the arms nearly to the wrist, and there were islets formed all over the abdomen and chest. Pain was never an accompaniment of these indurations. During the five months the child has been under observation, although the above extensions took place, these signs have cleared up irregularly but continuously. At the time of writing a small triangular patch of induration exists between the shoulders with the apex downwards on the spine, but it is not nearly so thick or hard as in the first place. There are a small patch on the right buttock and an islet on the right cheek just below the superior maxilla. The glands are somewhat enlarged and shotty in the posterior triangle of the neck and in the groin and the spleen reaches one finger's breadth below the ribs. Throughout there was nothing distinctive taking place in respect of the temperature. A blood count was made but gave nothing very definite—viz., polymorphs, 34; lymphocytes, 57·5; large mononuclears, 0·6; myelocytes, 0·5; and eosinophiles, 2; total, 100; erythrocytes, 4,212,000; and leucocytes, 22,500. The child has during her stay in the hospital thrived very satisfactorily and the skin has cleared up as described under massage, together with, first, thyroid and then thymus extract given internally. The thyroid was first given for a month when some improvement was made. Thymus was then given, beginning with a small dose and being raised to 30 grains per diem, though subsequently reduced to half that amount. During this last treatment progress appeared to be much hastened.

A small piece of skin and subcutaneous tissue down to the muscle was excised by Mr. J. P. Lockhart Mummery from the back of the thigh for microscopical examination. Macroscopically, the fat and superficial fascia appeared to be perhaps thicker than usual but only slightly. The fat, however, was certainly whiter and in larger globules than usual and was much harder to the touch. Nothing further abnormal was, however, detected under the microscope, a control examination being made at the same time of a similar specimen of healthy skin from another child of the same age. The serous infiltration and increase of connective tissue mentioned in some cases were certainly absent and in this way this case agrees with that of Northrup mentioned by Holt.

The fat was submitted to Professor J. Addyman Gardner, M.A., F.I.C., for examination. He reported as follows:—

> I am afraid my investigations do not throw much light on the case There were two difficulties which it was impossible to get over: (1) the small quantity of the sample, and (2) the fact that it was probably somewhat altered by the prolonged soaking in the formalin fluid. The dry specimen contained only 58 per cent. of fat, the rest being ordinary tissue matter, as far as could be determined in the dried residue after extraction, and this appears to agree with your microscopical report. The saponification equivalent was 205. The specimen also contained unsaturated fat—e.g., olein—but it was too small to permit of a quantitative estimation. The values usually given for the saponification equivalents of the various pure fats are: tripalmitin 209, tristearin 189, triolein 19?, horse fat 190·4. One might conclude from this that the specimen was particularly rich in palmitin. In the hope of throwing some light on the matter I examined the saponification equivalents of specimens of human fat cut from various parts of the body but they showed very considerable variation.
>
> I thought at first that the specimen of fat and the acids from it seemed more solid than is usual in human fat, but my examination of the specimen mentioned scarcely bears this out.
>
> On the whole, I am inclined to doubt whether the fat in the sample was in any way abnormal and think that the cause of the trouble must be sought in the associated matter.

It is thus obvious that the pathology of the disease is very obscure and it is hoped to call attention to the malady by the publication of this case, so that the work done here, although so negative, may be of some use to others as a starting-point for further investigation when new cases are obtainable.

[1] The case was exhibited at the Society for the Study of Disease in Children on Jan. 19th, 1906, and the observations herein recorded were conducted subsequently.

[2] Dr. A. M. Gray, the resident medical officer, has searched the records of the North-Eastern Hospital for Children for the past ten years and could find no mention of a case similar to the one about to be reported during that period of time.

A CASE OF ACTINOMYCOSIS.

PRIMARY ABSCESS OF THE LEFT LUNG EXHIBITING SPONTANEOUS CURE; METASTATIC MANIFESTATION IN THE PELVIS DECLARING ITSELF AFTER A YEAR'S LATENCY WITH ABSCESS FORMATION AND SLOW SPONTANEOUS CURE.

BY EDGAR TREVITHICK, M.D. CANTAB.

THIS illness occurred in a boy, aged 16 years, and has afforded a good example of a prolonged encounter between a living parasitic fungus on the one hand and human tissues on the other. If, as in this case, there now seems good reason to hope the tissues have ultimately succeeded in permanently stamping out the invasion they alone must be credited with the honours of the victory, for I have not been able to satisfy myself that any of the numerous artificial remedies that have been used have rendered any real assistance towards the patient's recovery.

There have been many points of interest observable in the course of this case of actinomycosis. It has illustrated in a marked degree the beneficent capabilities of rapid deposition of solid inflammatory exudation and has demonstrated with what great rapidity such exudation can be re-absorbed when its presence is no longer of service. It exemplifies the fact that a parasite may exist somewhere in the body for many months without showing any obvious signs of its whereabouts and that it may, after long periods of latency, declare its presence by stimulating violent and extensive tissue resentment.

One is tempted to suspect that during the long interval that elapsed in this case between the obsolescence of the original pulmonary lesion and the subsequent breaking-out of the secondary manifestation in the pelvis, obscure internal evolutions of some sort may have been taking place without giving rise to any gross manifestations. The condition of the patient's blood rather favoured such a view. For at the very outset of the second attack there was already

marked leucocytosis and in addition great excess of extracellular bodies. And it is interesting to wonder along what path the parasite passed in its slow transit from one part of the body to another. The rapid fluctuations of body weight exhibited by the patient during the illness were very striking and the rapid spontaneous cure of the fæcal fistula that resulted in the course of the contest is also of interest.

History of the pulmonary attack.—When first seen on Oct. 19th, 1903, the boy was very wasted, had marked hectic flush, and complained of shortness of breath. He had been employed in "carrying milk from the farm to the village" and had "caught cold," he thought, three months previously. Even since that time he had been getting thinner and losing strength and just recently he had suffered from troublesome dry cough, loss of appetite, and diarrhœa. There had been no expectoration but his friends "had noticed a very curious odour about his breath." On examination I found evidence of extensive consolidation in the lower lobe of the left lung and I, too, was struck by the curious odour of the breath. On Oct. 26th the patient began to cough up very large quantities of offensive pus, the odour of which resembled that previously remarked in the breath. With the onset of this copious expectoration the general condition began rapidly to improve. A few days later the physical signs indicated the existence of a cavity about the centre of the lower lobe of the left lung, surrounded by a broad zone of consolidation. By Nov. 13th the cough and expectoration were very much less and the latter was no longer offensive. The boy went to a convalescent home on Nov. 30th, weighing 7 stones 7 pounds, having gained 21 pounds in body weight in 27 days. And later he went back to his own home in the country as "cured" and was written down as having suffered from "abscess of left lung."

It must be confessed that at this stage of the illness no diagnosis of actinomycosis was made. The characteristic yellow bodies which were so plentiful in the discharges from the subsequent pelvic lesions were not noticed in the sputum. They were not, indeed, either thought of or sought for. But certain observations that were written down at the time, taken together with the study of the subsequent course of the case, make it, I think, certain that this pulmonary abscess was in reality caused by the same organism as later asserted itself in another part of the body.

A note written on Oct. 24th, 1903, describes the sputum as follows: "Very offensive, with singular odour. Shreddy, making films that stain badly and seem to contain fatty material. No tubercle bacilli, but swarming with very fine hair-like streptococci showing curious tendency to interlace into tangles." This was a clumsy description but a sketch I made at the time showing the organism, together with my recollection, makes me certain that the "very fine hair-like streptococcus" was in reality derived from actinomyces and makes it probable that the yellow characteristic bodies, although overlooked, may yet have been present. It is not improbable that ordinary clinical observation is easily capable of overlooking their presence in sputum; indeed, this case has led me to reflect about certain other cases of "pneumonia" that have from time to time presented puzzling features and yielded puzzling sputa. I suspect that even in hospital practice the term "pneumonia" as sometimes used is more convenient than scientific.

History of the secondary attack.—After about a year's "perfectly good health" the boy came back complaining of pain in his left flank and exhibiting a very hard craggy lump firmly attached to the brim of the pelvis. From Oct. 26th, 1904, to Sept. 28th, 1905, he was ill in bed and during this year he passed through many vicissitudes of illness, being more than once seemingly at death's door. The body weight in September, 1904, had been 8 stones 2 pounds and this gradually decreased until on April 3rd, 1905, it was 6 stones 4 pounds. At this latter date there was very extensive involvement of the lower part of the abdomen. The infested areas were obstinately and lavishly circumscribed by very extensive barriers of solid inflammatory exudation, which eventually reached as high as the level of the umbilicus. This abdominal contest was accompanied by irregular and sometimes very high pyrexia and led to the formation of two separate intra-peritoneal abscesses, one of which eventually communicated with the large intestine. There was considerable enlargement of the spleen and the patient's troubles were much aggravated by pressure on nerves and bedsores. About this time it seemed as if recovery was very unlikely. In the end, however, the tissues, as had been the case in the original pulmonary attack, were victorious. On Oct. 2nd, 1905, the body weight had risen to 8 stones 12 pounds. The fæcal fistula had healed spontaneously. The discharge from the two abdominal issues was very greatly reduced and the intra-abdominal buttresses of seemingly solid tissue had all but disappeared. Since Nov. 1st, 1905, the patient had been at work as a baker and in June, 1906, when I saw him, he reported himself and looked in excellent health.

On the subject of treatment I have nothing much to say. The initial manifestation in the lung subsided and healed spontaneously. During the long activity of the subsequent pelvic manifestations many lines of treatment were tried. I was induced to give a long trial to the x rays. I thought their application increased the vascularity of the tissue in the neighbourhood of the issues. Iodide of potassium seemed to me to have no effect.

Bacteriological considerations.—The yellowish bodies characteristic of actinomycosis were abundant for several months in the purulent discharge obtained from the intra-abdominal lesions. They were examined by several pathologists who all agreed as to their nature. When one of these bodies, after having been cleansed in sterile salt solution, was incubated in broth a very copious yellowish deposit always formed round it at the bottom of the tube in the course of a few days. And microscopically this deposit, in addition to containing masses of finely divided parts, was always rich in elongated hair-like filaments. Three different observers failed to obtain cultures from it on the surface of solid media. It was injected subcutaneously in rabbits but failed to produce actinomycosis.

I took a good deal of interest in examining the discharges from these lesions. There are observable among the pus cells irregularly shaped interlacements of very delicate filaments, containing in their interstices aggregations of minute bodies irregularly rectangular in shape. There were also present considerable numbers of the characteristic yellow bodies already mentioned as being visible to the naked eye. These latter seemed on examination to consist of a yellowish amorphous central core, an intermediate interlacement of filaments and a peripheral dressing of club-like bodies. It does not seem very difficult, I think, to imagine the filamentous interlacements blossoming out into full-blown characteristic bodies. This imagination was strengthened by observing sections of young colonies of aspergillus glaucus and noting the relationship between the strongly eosinophile and charmingly graceful fruit-heads and the basophile mycelium from which they spring.

Cheltenham.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF SCHÖNLEIN'S PURPURA.

BY EDWARD C. B. IBOTSON, M.B. LOND.

I WAS summoned in the evening of June 11th last to see a boy, aged two years, as something unusual had been noticed in the state of his penis. I found a tight and much swollen prepuce in the condition of phimosis. His mother attributed this to a fall. I also observed that there were some large purple spots on the left thigh. I punctured the œdematous prepuce, squeezed out some of the serum, and ordered lead lotion to be applied frequently. His temperature was normal. On the next day (June 12th) there was still some phimosis, so the lead lotion was continued. The boy's temperature was now 100° F. and there was a copious purpuric eruption on the legs and arms. The parents were naturally alarmed, fearing some malignant infectious fever. I was, however, able to reassure them, pointing out that there were no signs of variola, measles, or scarlet fever. I also said that in my opinion the disease was either purpura or scurvy and I ordered lime-juice well sweetened to be freely given. On the following day there was some urticaria and in the centre of some of the wheals there was purpura. The purpura was strictly confined to the extremities—namely,

the legs, the thighs, the buttocks, the arms, and the forearms. Some of the patches measured one or two inches in diameter. On the 14th there were painful swelling of the left knee-joint and tenderness of all the bones; a purpuric eruption had also commenced on the face. The boy's temperature on the 13th and 14th was normal. I prescribed a mixture containing 24 minims of suprarenalin (Armour), 20 minims of liquor rosæ dulcis, and water to make up one and a half ounces; one drachm to be taken every four hours. I also ordered the knee to be wrapped in cotton-wool and bandaged. Those purpuric patches which had faded left a brown stain behind. On the 15th the swelling of the knee was better and the œdema of the prepuce was gone. There was no further eruption on the extremities but some fresh spots had come out on the face. The child was sitting up and appeared to be much better; his bones were also less tender. On the 16th all swelling in the knee was gone; the patient continued to take the suprarenalin. On the 20th nearly all the purpuroid patches on the face were gone, leaving brown stains, and the boy was much better.

The case illustrates the following points: (1) combination of wheals and purpura, a combination which is diagnostic if not pathognomonic; (2) moderate pyrexia at the commencement of the illness; (3) swelling of the knee and prepuce; and (4) rapid beneficial action of suprarenalin.

Dover.

A CASE OF CEREBRO-SPINAL MENINGITIS.

By JOHN M. BENNION, M.B., B.C. CANTAB.

IN THE LANCET of June 30th, p. 1815, I read with great interest an article by Dr. William Wright and Dr. William Archibald on Epidemic Cerebro-spinal Meningitis and it has induced me to send you the notes of the following case.

The patient, who was a girl, aged six years, was taken ill on June 23rd last with severe headache and the "cold shivers." On the 24th she vomited several times, the mother stating that the child could keep nothing down. On the 25th, when I saw her for the first time, she was unconscious and delirious, the pupils were large, there was a patch of herpes on the lower lip, and the head was retracted. The temperature was 101·2° F. and the pulse-rate was 80. The knee-jerks on both sides were exaggerated and Kernig's sign was present. Nothing abnormal was observed in the chest. The girl was much worse on the morning of the 26th, the temperature being 102·6° and the pulse-rate 120; the respirations were 48 per minute and were noisy owing to mucus in the throat. A squint was noted. The retraction of the head was more marked. There were constant convulsions which involved the face and all four limbs. It was obvious that the child could not live long and she died early on the morning of the 27th. No lumbar puncture was performed and unfortunately a post-mortem examination was not allowed.

At first sight I thought that the case was one of tuberculous meningitis but the sudden onset, the labial herpes, and the abrupt termination, I think, justify the diagnosis of cerebro-spinal meningitis. Up to the present no other member of the family has been attacked.

St. Mary Cray, Kent.

A CASE OF ABSENCE OF THE UTERUS.

By ALICE MAUD SORABJI, M.B., B.S. LOND.

THE patient, who was a Hindoo, aged 19 years, came to me complaining of never having menstruated. She was well-built and well-developed, in fact rather broader and stronger than other girls of her class and age. In appearance there was nothing abnormal about her face or body. She had no hair about the face except the faintest trace on her upper lip. The breasts were well developed. The labia majora were very small and tightly stretched from the anterior to the posterior end; there were no folds representing the labia minora; the clitoris was hypertrophied. On making a vaginal examination the vagina was found to be quite small, only one and a half inches deep at most. No uterus was found. In the posterior wall of the vagina the mucous membrane was at one spot slightly puckered round a central point. She was married. She complained of a "fulness" in the head and the lower part of the abdomen which recurred every four weeks.

Bahawalpur, Punjab, India.

A Mirror
OF
HOSPITAL PRACTICE
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.

A CASE OF APPENDIX ABSCESS WITH AN UNUSUAL COMPLICATION.

(Under the care of Mr. RUSSELL J. HOWARD.)

THE patient, a female, aged 17 years, was admitted to the Royal Waterloo Hospital on Feb. 7th, 1906, complaining of abdominal pain and vomiting. She gave the following history. Whilst dressing on the afternoon of Jan. 24th she was suddenly seized with pain in the right lower abdomen and vomited. She went to bed and was kept on milk and beef-tea but had no medical attendance. Four days after the onset, the symptoms being relieved, she was sent to her own home. There she was confined to bed for most of the day but got up in the afternoon and went to see her medical adviser who prescribed treatment. As the vomiting continued, on Feb. 7th she went to the hospital by omnibus and tram from Wimbledon. During her illness she had taken nothing but milk and beef-tea as she had vomited every day. During the first week the bowels had not been opened but after taking medicine the patient had had diarrhœa.

On admission she complained of pain in the right iliac fossa and a lump which her mother had discovered, nausea, and diarrhœa. She showed the abdominal facies; her tongue was coated and dry. The temperature was 100° F., the pulse was 116, and the respirations were 34. On abdominal examination there was an obvious swelling in the appendix area both to sight and touch. This swelling was resonant on percussion and was situated rather higher and more internally than the usual appendix abscess. Abdominal respiration was slight and there was marked muscular rigidity of the abdominal walls. Rectal examination made under an anæsthetic revealed nothing abnormal in the pelvis. The diagnosis made was retrocæcal appendix abscess.

Operation was performed six hours after admission. An incision was made over the most prominent part of the swelling and on opening the peritoneal cavity the cæcum came into view and there was an entire absence of adhesions in front. The general peritoneal cavity was shut off with gauze and a slight search revealed an abscess situated in the angle between the ileum and the cæcum, which contained about two ounces of foul-smelling pus. The cavity passed in an upward direction behind the ileum and the cæcum. The appendix was not seen and no concretion was found. The abscess cavity and the pouch of Douglas were drained with indiarubber tubes and the wound was partially united with sutures. After the operation the pulse was 115, the temperature was 101°, and the respirations were 35.

Progress.—On Feb. 8th the pulse was 112, the respirations were 37, and the temperature was 98°. Pus was passing out of the abscess cavity but none from Douglas's pouch. There was some abdominal pain but no distension. Incontinence of urine and fæces was present. On the 9th the pulse was 130, the respirations were 45, and the temperature was 99°. There was no general abdominal pain or distension but some vomiting was present. Offensive pus came from both tubes. On the 10th there were some abdominal distension and slight vomiting. The general condition had improved. The pulse was 120, the respirations were 25, and the temperature was 99·6°. On the 12th there were still abdominal distension and slight vomiting but food was taken well. The tongue was moist. The pulse was 130, the respirations were 35, and the temperature was 99°. A turpentine enema was administered which gave relief. At 10 P.M. on the 12th there was considerable hæmorrhage from the wound which soaked the dressing and filled both tubes with blood clot. When the wound was examined the bleeding had stopped; the tubes

were removed, a gauze drain was substituted, and a light dressing was applied, the wound being disturbed as little as possible. The pulse was 156. No further hæmorrhage occurred from the wound but the patient died suddenly at 2 A.M. on the 13th.

Necropsy.—On opening the abdomen the small intestine was distended and pus was found spreading from the abscess region over the parietal peritoneum but there was no pus or lymph between the coils of the intestine. The large bowel was contracted and there was a large quantity of blood and pus in Douglas's pouch. The appendix was found lying behind the cæcum and running upwards and slightly inwards (Fig. 1); it was about four inches long and the last inch was completely gangrenous; there was no concretion. The abscess cavity was behind, and somewhat internal to, the cæcum and behind the last part of the ileum. The walls of the cavity were formed by the following structures—cæcum, ileum, duodenum (second part), psoas muscle, iliac vein, vena cava, and the iliac fascia in the right iliac fossa (Fig. 2). In the cavity were pus and blood clot. In the duodenum just where it turns up and in to run across the right crus of the diaphragm was a perforation with sloughing edges of about the size of a pea. The ulceration on the mucous surface was smaller than that on the peritoneal. On opening the duodenum and ileum they were found to contain a large quantity of blood. The iliac veins and the vena cava were normal. The rest of the organs were normal.

FIG. 1.

Diagram showing position of appendix.

FIG. 2.

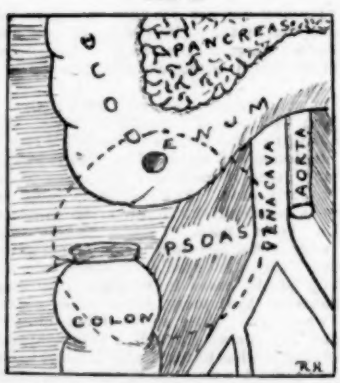


Diagram showing position of abscess cavity within dotted circle and perforation of duodenum.

Remarks by Mr. RUSSELL HOWARD.—The interest of this case lies in the two complications—hæmorrhage and perforation of the duodenum.

Hæmorrhage is a fairly well-known complication and appears to be usually from erosion of the iliac vessels or the deep circumflex iliac artery. J. C. Lewis[1] records a case of hæmorrhage from the common iliac vein. G. Sourdille[2] relates a fatal case with hæmorrhage from the external iliac artery. J. D. Malcolm[3] at the Clinical Society of London reported a case with severe hæmorrhage which recovered, the source of the bleeding not being ascertained, and in the discussion that followed other cases were mentioned, Charters Symonds reporting a case in which he found the external iliac artery and vein opened. Box and Wallace[4] report a fatal case of bleeding but the source of the hæmorrhage was not discovered; two severe hæmorrhages occurred per rectum. Ramsay[5] records a case of sloughing of the external iliac artery in which the vessel was ligatured and recovery took place. Dyce Duckworth reports a case in which the hæmorrhage occurred on the eighth day, with recovery. Moynihan, quoting Murphy and Mayo, states that the bleeding occurs from small vessels on the inner side of the appendix.

Perforation of the stomach and duodenum are also well-known complications and the following cases have been reported. Dieulafoy[6] records a fatal case of hæmatemesis following removal of the appendix in which acute necrosis of the mucous membrane of the stomach was found. Warren Low[7] reports a case of perforation of an ulcer of the stomach with appendicitis. Lediard and Sedgwick[8] report a case of perforation of an ulcer on the pancreatic surface of the second part of the duodenum; there was no acute inflammation of the appendix and the abdomen was not drained. In the same paper they also quote a case of gastric ulcer under the care of F. Victor Milward. Watson Cheyne and H. Wilbe[9] report a case of perforated gastric ulcer with appendicitis. Bolton Carter[10] gives particulars of a case of an appendix abscess which was opened and drained with an indiarubber tube in which there was hæmorrhage from the wound and death occurred. Post mortem the appendix was gangrenous and lying deeply over the pelvic brim. The ulcer which had perforated was on the anterior surface of the second part of the duodenum. The direction in which the abscess had tracked and the direction in which the tube was inserted are not given.

The case described differs from all those quoted above in that the perforation in the duodenum was in the wall of the abscess and that the perforation was certainly *into* the duodenum. Whether the perforation was caused by the tube used for drainage resting against the duodenum is doubtful, as it was removed and gauze was substituted when the hæmorrhage occurred, but from the direction in which the tube ran it most likely did rest against the second part of the duodenum and was the cause of the fatal result. The case described by Bolton Carter may have been of this nature but in his case the appendix was hanging over the brim of the pelvis and the abscess wall probably did not include the duodenum.

[1] Medical Record, New York, 1894, p. 463.
[2] Bulletin de la Société d'Anatomie de Paris, 1894.
[3] THE LANCET, March 3rd, 1906, p. 600.
[4] THE LANCET, June 6th, 1903, p. 1668.
[5] THE LANCET, June 6th, 1903, p. 1680.
[6] Quoted by Battle and Corner, Diseases of the Appendix, p. 176.
[7] THE LANCET, June 25th, 1904, p. 1789.
[8] THE LANCET, Sept. 10th, 1904, p. 761.
[9] THE LANCET, June 11th, 1904, p. 1641.
[10] THE LANCET, Nov. 2nd, 1901, p. 1194.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.

A CASE OF SUCCESSFUL EXCISION OF A PORTION OF THE RIGHT LUNG FOR PULMONARY TUBERCULOSIS.

(Under the care of Mr. J. LIONEL STRETTON.)

THE patient, a female, aged 28 years, was admitted to the infirmary on July 19th, 1900. There were signs of tuberculous disease at the apex of the right lung, for which she was treated with increasing doses of creasote with temporary benefit. After her discharge the symptoms—cough, expectoration, and night sweats—increased in severity and she suggested the possibility of removing the diseased portion of lung. A full explanation of the danger was given to her and to her husband and they both desired the operation to be undertaken. She was readmitted on August 2nd, 1900, when the following note was made. "The patient gives a history of being treated four years ago for a delicate chest. For the past year and a half she has had a continuous cough with expectoration and night sweats; she has also been losing flesh. There is dulness over the right apex as far down as the lower border of the third rib. Tubular breathing and crepitant râles. The evening temperature is slightly raised and she has night sweats. The urine contains a trace of albumin."

On August 7th the patient was placed under ether. A vertical incision was made, about three inches long, with its

centre over the third rib, two inches from, and parallel to, the breast bone. The third rib was separated from its cartilage and about four inches of it removed. On opening the pleura the lung was found closely adherent. The hand was introduced and the adhesions were with great difficulty separated down to the lower level of the third rib. There was profuse hæmorrhage, which was arrested by sponge pressure. The portion of lung separated was then surrounded with a serre-nœud and cut away, leaving a stump of about the size of a five-shilling piece.

For the first 24 hours after the operation the patient remained in a very collapsed condition and suffered from pain and cough. At the end of 48 hours an attempt was made to remove the serre-nœud, but as rather free hæmorrhage occurred the wire was twisted and left on. For the next few days there were considerable difficulty in breathing, constant cough, and hæmorrhagic expectoration. There was also a good deal of hæmorrhage from the wound. Blood was found to collect in the pleura and had to be removed with a syringe. The breathing and cough gradually improved and the hæmorrhage ceased after the seventh day. In spite of great care with the dressings symptoms of sepsis supervened and on the 22nd it was deemed advisable to make a counter opening in the back and thread a large drainage-tube through. From that date improvement was continuous though slow. The wire came away on the 25th. The tube was removed on Nov. 7th and the wound was healed by the 14th. Her cough and expectoration entirely ceased by Nov. 23rd.

A specimen of the sputum was sent to the Worcestershire county council laboratory for examination at the end of October and the report stated that no bacilli could be found. The portion of lung removed consisted of about half of the right upper lobe and contained a cavity. Unfortunately it was destroyed before a thorough examination had been made.

Remarks by Mr. STRETTON.—As I was unable to find any account of a similar operation it was necessary to devise the method of performing it. The chief difficulty I foresaw was the question of adhesions and this proved to be correct. The removal of one rib gave ample room for all the manipulations. It was found impossible to fix the stump in the wound because this caused dragging on the root of the lung accompanied by alarming symptoms of collapse. In future this difficulty could be overcome by removing several ribs and so allowing the chest wall to be brought down to the stump.

I had a letter from the patient in June of this year. She is still travelling about as a hawker but as she has not been in this town since I am unable to state what condition her lung is in.

The removal of a portion of lung for the cure of pulmonary tuberculosis is no doubt heroic and it is probable that it will be some time before patients will submit to the risk involved. With increased experience I have no doubt that the danger can be considerably lessened. The operation is not one of extreme difficulty and if cases were secured at an early stage the percentage of recoveries would probably be greater than are obtained under the methods of treatment now adopted.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Primary Cancer of the Ovary.—Contracted Pelvis.—Adenoma of the Labium.—Exhibition of Specimens.

A MEETING of this society was held on July 4th, Dr. W. R. DAKIN, the President, being in the chair.

Dr. A. LOUISE MCILROY read a paper (followed by a demonstration) on Primary Cancer of the Ovary. Primary cancer of the ovary occurred in women about the time of the menopause or after, but was found in young patients; in the latter cases menstruation was influenced, cessation of the periods occurring. Previous child-bearing had no influence. Pain was not a marked symptom, patients seeking operation on account of the swelling of the abdomen. Ascites was present in most cases. Metastasis depended upon the duration of the disease and the integrity of the tumour capsule. The probability of recurrence was great. Malignancy was rarely suspected previously to the operation. Both ovaries were frequently affected, one showing a more advanced stage of the disease than the other. In the early stage the capsule was firm but later it became broken down and tumour tissue proliferated through it. Germinal epithelium was absent as a rule. No Graafian follicles or corpora lutea were found. Previous benign change in the ovary was always present. The most common forms of cancer in the ovary were the glandular cystic form and the alveolar with connective tissue increase. The growth was found near the surface and in the folds in early specimens. The origin of the growth was from the follicle cells and from cells which had been derived from the germinal epithelium. The so-called ova of the German pathologists were masses of degenerated protoplasm; they were retrogressive products of the follicle cells. Karyokinesis was not well marked in these cancer-cell tumours. The cells found in cancer of the ovary resembled those found in benign growths, but differed in their distribution, irregular arrangement, and in the amount of proliferation.—Dr. T. W. EDEN said that on two points, at any rate, Dr. McIlroy appeared to have made an important contribution to their knowledge. One point was that she had traced the invasion of the ovarian stroma by cells derived from malignant changes in the germinal epithelium. The second was that she believed she had traced the transition stages by which the epithelial cells of a benign cyst became transformed into the malignant cells of an adeno-carcinoma.—Dr. H. RUSSELL ANDREWS congratulated Dr. McIlroy on the excellent demonstration that she had given and asked her whether her researches had led her to agree with the teaching of some German writers that many adenomatous or pseudo-mucinous ovarian cysts which appeared to be perfectly innocent to the naked eye proved to be malignant on microscopical examination. If this teaching were accepted it became the surgeon's duty to remove all adenomatous ovarian tumours whole without diminishing their size by tapping, however large they might be.—Mr. J. S. FAIRBAIRN said that there was one point in the paper which he had not been able to follow and that was the statement that the carcinomatous tumours in all cases followed on a previously benign growth. The proof of this was far from complete and, as he understood, was based on observation of histological changes in different parts of the tumour, in other words, on tracing the transition of a regular goblet-celled epithelium into an irregular epithelium growth of carcinomatous cell.—Dr. H. WILLIAMSON said that from his own observations he could confirm two of the conclusions which Dr. McIlroy had arrived at. The first was with regard to the development of the cells of the membrana granulosa and the second was the recognition of the part played by later downgrowths of the germinal epithelium in the genesis of ovarian tumours.—Dr. MARY THORNE did not consider that pain was such a very rare symptom in the earliest stage of carcinoma of the ovary and quoted a case of her own in which acute pain was the first thing which attracted attention.—Dr. MCILROY replied.

A short communication was read by Dr. C. J. NEPEAN LONGRIDGE on 64 Cases of Contracted Pelvis. These cases were treated during 1905 at Queen Charlotte's Hospital. The system of admission was arranged so that it was possible to recognise and treat if necessary the cases of contracted pelvis at an early date. The results in these cases were satisfactory as regarded the mothers, no death or serious complication being noted. Eight infants died, three of whom were suffering from some abnormality incompatible with life. A special feature of this series was a group of 14 cases in which labour was unaided and spontaneous, the most remarkable case being a primipara who gave birth to a living child weighing 5 pounds and 12¼ ounces through a true conjugate of two and seven-eighths inches in ten hours. Nine of these patients were primiparæ and five were multiparæ. Two of the infants were born dead, one being macerated and one hydrocephalic. Labour was induced by bougies in 17 multiparæ and in six primiparæ. The date of induction was determined by estimating the relative size of the head and the pelvis. Delivery was unaided in 17 cases, five patients were delivered by forceps, and one by version. The mothers all made a good recovery and one infant was born dead. A second infant died on the third day with an imperforate anus. The time which elapsed between the passage of the bougies and the birth of the child averaged 92·6 hours. In 18 of the 64 cases delivery was brought about by forceps and

in five after induction; the mothers and infants did well with the exception that in one case the cord was prolapsed and the infant died. The occiput was posterior in 14 cases and was rotated forwards by the hand in six. Version was performed in six cases in which contraction was present. Two infants died and the mothers did well. Cæsarean section was performed in nine cases. The mothers all did well and one infant died. In one case the operation was performed for the second time. The treatment of contracted pelvis appeared to be narrowing down to two methods of election—namely, induction and Cæsarean section, and the experience gained at Queen Charlotte's Hospital tended to show that the former was a satisfactory procedure with a conjugate of three and a half inches and over, whereas Cæsarean section was the best method to adopt in cases with conjugates of about three inches and under.—Dr. W. RIVERS POLLOCK thought that Dr. Longridge in his excellent paper had spoken too disparagingly of de Ribes's bag. If the bougie failed for three days to bring on labour it could be safely and rapidly induced by the introduction of the bag followed by traction. When the bag was expelled the os uteri was fully dilated and rapid delivery could be safely effected. The uterus would be found to retract and contract well after the expulsion of the placenta.—Mr. J. H. TARGETT congratulated Dr. Longridge on his interesting and valuable clinical report of the work done at Queen Charlotte's Hospital during 1905. With regard to the use of de Ribes's bag he found it a valuable means of inducing uterine action when bougies had failed to excite premature labour. He thought that it was best to introduce the bag in Sims's position and to place it between the membranes and the uterine wall. By so doing compression of the umbilical cord was prevented and the prematurely born child did not suffer from direct uterine pressure as after the escape of the liquor amnii.—Dr. LONGRIDGE replied.

Dr. WILLIAMSON read a short communication on Adenoma of the Labium. The patient from whom the specimen was removed was an unmarried woman, aged 62 years, who for two and a half years had suffered from a slight blood-stained vaginal discharge and on one occasion, a year before she came under observation, from a somewhat profuse hæmorrhage. On the right labium majus was a small growth equal in size to a split pea; it was soft, of a pinkish colour, and bled readily on touch. The growth was diagnosed as an epithelioma and was removed by Dr. F. H. Champneys in 1903. No recurrence had taken place. On microscopical examination the tumour proved to be an adenoma composed of irregular branching tubes lined by columnar epithelium; some parts of the growth were so irregular as to suggest carcinoma. Three similar cases had been reported, two by Pick and one by Schickele, and brief accounts of those cases were given. Dr. Williamson then discussed the pathology of the condition, reviewing the theories of Schickele and Pick; the former regarded the growths as arising in abnormal "rests" of the Wolffian body and duct, the latter believed them to be adenomata arising in connexion with the sweat glands. Dr. Williamson regarded the latter theory of origin as the more probable. Attention was directed to the close resemblance which the growths bear to certain forms of malignant adenoma and he concluded by stating that as this case had been under observation longer than any of those previously recorded he offered it as a contribution to the natural history of the growths.—Dr. HERBERT R. SPENCER did not think that these growths were as rare as appeared in the paper. He had met with two cases himself and thought that Dr. Williamson had overlooked some cases in the literature. The origin of these growths was by no means certain. Mr. Lawrence, the curator of the museum at University College, was of opinion that they probably arose in sebaceous glands on the grounds that they had a distinctly lobulated structure and the tubules had such a distinct racemose arrangement as to leave no doubt that they did not arise from tubular glands.—Dr. WILLIAMSON in reply, said he thought that the tumours referred to by Dr. Spencer were sebaceous adenomata and belonged to a class different from those now under discussion.

The following specimens were shown:—

Dr. SPENCER: Specimen from a case of Cæsarean Section followed by Hysterectomy for Fibroids complicating Labour.

Dr. ANDREWS: (1) A Degenerating Fibroid removed during the Puerperium; and (2) A large Cystic Fibroid.

OPHTHALMOLOGICAL SOCIETY.

Congenital Distichiasis.—The Structure of the Choroid at the Macula.—Unilateral White Eyelashes and Tufts of Hair.

A MEETING of this society was held on July 13th, Mr. J. PRIESTLEY SMITH, the President, being in the chair.

Mr. A. R. BRAILEY read a paper on Congenital Distichiasis and gave a clinical description of a case together with the result obtained by making a microscopic examination of a small portion of the lids. The chief point of interest was the fact that the Meibomian glands were apparently completely absent and their place was taken by hair follicles. He then gave a description of four other cases seen in the clinic of Professor Fuchs at Vienna. These were the only cases seen there during a period of 20 years and show how extremely rare this deformity is. He also described a case reported by Kuhnt. Mr. Brailey drew attention to the distinction which should be recognised between trichiasis and distichiasis and urged the advisability of limiting the latter term to the congenital cases. He gave a list of other cases which had been reported.

Mr. C. H. USHER read a note on the Choroid at the Macular Region. He drew attention to the fact that in sections of albinos' eyes examined by Mr. E. Nettleship and shown at the meeting of the society in November last pigment was present in the choroid but limited to the spot corresponding to the yellow spot region. He had since examined 11 normally pigmented eyes and had found: (1) a deeper pigmentation of the retinal epithelium at the yellow spot region and an increased thickness of this layer; (2) a marked increase in the pigmentation of the choroid; and (3) an increase in the thickness of the choroid. From the above observations it might be expected that if pigment was present at all in an albino's eye it would be found in the macular region.

Mr. USHER also read a paper on a case of Unilateral White Eyelashes and Tufts of Hair. The patient was a girl, aged three years, whose eyelashes on the left side were quite white and she also had two tufts of white hair on the left side of her head. There was nothing else abnormal in the mother or child and the pregnancy was normal in every way. The condition was first noticed about the third day after birth. All the eyelashes on the right side were light brown in colour, so also was the greater part of the hair of the head. The family history was carefully drawn out and although there were some albinos in the family yet no other member seems to have had this peculiar condition.

DERMATOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on July 11th, Dr. H. Radcliffe Crocker being in the chair.—Dr. James Galloway showed a case for diagnosis of a Seasonal Eruption on the Face of a middle-aged woman. Dr. Galloway had thought that the condition was possibly a form of lupus erythematosus, but there had been vesication and he was inclined to consider it as allied to hydroa æstivale. This opinion was supported by the majority of those present.—Dr. Crocker showed a case of Mycosis Fungoides of very typical character in an old man who had been treated with the x rays with considerable benefit before going to Dr. Crocker. The disease was now present on the legs, the forehead, and the face, the skin in these parts being much infiltrated and the patient suffering from great irritation. The treatment with the x rays was being continued.—Dr. T. Colcott Fox showed a case for diagnosis—a very extensive Pink and Scaly Eruption occupying the greater part of the trunk, the arms, forearms, and hands; there had also been vesicles on the fingers and toes. Dr. Fox suggested the diagnosis of pityriasis rosea which found many supporters.—Dr. Crocker and Sir E. Cooper Perry thought that it was more probably a case of seborrhœic eczema.—Mr. Malcolm Morris showed a father and daughter, the subjects of Congenital Tylosis. In both patients the skin of the palms and the soles had been immensely thickened and hardened from birth, the keratodermic areas being bounded by an erythematous border. There were two other children in the family who remained wholly free from the disease.—Mr. George Pernet showed a young man whom he had treated for Linear Nævus of the Hand and Forearm with scraping and the application of carbolic acid. Some members considered the case as more typical of tuberculosis verrucosa cutis.—Dr. J. M. H. Macleod showed a case of Multiple Idiopathic

Keloid in a man, aged 55 years. He had a large patch of keloid on the chest and several smaller patches of similar character upon the shoulders and back. All the patches were violently itchy. No history of any previous injury to account for the development of the keloids could be obtained.—Dr. Wilfrid S. Fox showed a typical case of Adenoma Sebaceum in a little boy, the subject of epileptic fits. The disease had been noted for the first time at the age of three years after the child had had several fits.—Dr. E. G. Graham Little showed: 1. A girl, aged five years, who had had an extensive eruption of Sclerodermia upon the scalp, the face, and the body for the past 18 months. There was also marked hemiatrophy of the face on the affected side and of the tongue. All the lesions were on the left side of the body. The child appeared to be delicate and had a quantity of downy hair covering the midvertebral line. 2. A case of Rodent Ulcer in an elderly man who had had this ulcer for 25 years and who had been treated for it with some success with the x rays. In the past fortnight he had developed upon the site of the unhealed rodent ulcer a tumour of the size of a Barcelona nut. The general opinion was that this fresh development was epitheliomatous and in view of the extreme rapidity of its growth immediate excision was recommended.

Reviews and Notices of Books.

A Handbook of Climatic Treatment, including Balneology. By WILLIAM R. HUGGARD, M.A., M.D.R.U.I., F.R.C.P. Lond., H.B.M. Consul at Davos, Switzerland. London: Macmillan and Co. 1906. Pp. xvi.-536. Price 12*s.* 6*d.* net.

Dr. Huggard in the valuable book before us has produced a volume which should serve as a most useful work of reference for any practitioner who has frequently to recommend climatic or balneological treatment for his patients. We are told in the preface that the chief aims of the book are to place the therapeutics of climate on a sure foundation and to enable the physician readily to master the principles of choice in the selection of baths and mineral waters. We may congratulate Dr. Huggard upon the success which has attended his treatment of his subjects, for the result has been to produce a volume which is a mine of useful information, written in a manner most convenient for reference and in interesting style. The critical character of his consideration of the uses and actions of climate and the rigid analysis to which he subjects the claims of various health resorts, watering places, and baths from the standpoint of physiological experiments, as well as that of experience, greatly enhance the value of the work. We find no mere copy of the self-advertised virtues of the various resorts and their mineral waters but simply the indications which should suggest their recommendation and the benefits which may be expected from them, while their limitations and contra-indications are carefully set forth.

In analysing the action of climate and its influence upon bodily health and functions a section is devoted to a concise presentation of the principal factors of meteorology, with especial reference to their medical bearing. The atmosphere, temperature, humidity, barometric pressure, and atmospheric electricity are all considered in detail, and the influence which each factor exerts upon climate is carefully and exhaustively set forth. This section concludes with a chapter devoted to general influences affecting climate, including those of land, water, wind, forests, and mountains.

The second section deals with the physiology of climate; in it the various meteorological factors are considered from the standpoint of their actions upon the organism in health and disease. This part of the work contains a wealth of most interesting information upon the reaction of the organism to changes in its surroundings, each meteorological factor being considered separately in regard to its effects upon the body generally and upon the various organs and their functions. This section contains exhaustive references to the various experimental observations which have been made on the subject and forms a most comprehensive and scientific basis from which to study the practical applications of climatic treatment. The general principle which Dr. Huggard deduces is that "the most fundamental point in the action of climate is its influence on tissue change." The demand for tissue change depends "on the surrounding temperature, as well as on the wind, moisture and all other circumstances affecting the abstraction of heat." The importance, however, of the patient's power of response is very strongly emphasised; it is found that individuals react very differently to the same external conditions, and in recommending a certain climate it is necessary to gauge beforehand how the particular individual will respond to the greater or less demand for heat induced by it. It is obvious that this determination of the patient's powers of response is of great importance, and Dr. Huggard states that careful inquiry of the patient as to how he bears heat and cold, combined with a careful study of the bodily functions, will enable a right conclusion to be made in the great majority of cases in accordance with his general principle that "the best climate for a person is that where nutrition is at the highest level, and nutrition is at the highest level where the demand for tissue change—the demand for the production of heat—best coincides with the patient's power of response." An interesting discussion of the question of acclimatisation is also given in this section.

The third part of the book deals with climates and health resorts and commences with a classification of climates upon the basis of the demand made by each climate for the production of heat. The various health resorts of the world are then described, with especial reference to the climatic conditions obtaining at each and their value in different conditions of disease or ill-health. An interesting chapter on the Ocean as a Health Resort is included in this section.

Part IV. is devoted to the consideration of baths and mineral waters. The therapeutics of the different forms of baths and of the external application of the various mineral waters are critically considered and in like manner the actions of the various waters when taken internally are carefully set forth and compared with the known pharmacological actions of their principal constituents. The various waters are classified into two main groups—depurative and tonic. The former comprises the ablucnt, stomachic and diuretic, and the aperient waters, the latter the hæmatogenic, and the alterative and nervine. The examples of the different groups are given with analyses of their various springs and the conditions for which they are recommended. Throughout this section Dr. Huggard is most cautious in his recommendations. At the commencement he refers to the air of mystery which has always hung around mineral waters and points out that "owing to vague tradition and to the parade in analyses of strange and unimportant constituents mineral waters are still more or less cloaked in mystery," and further points out the special qualities which custom and tradition may have assigned to different waters of essentially the same therapeutic value, instancing the purely arbitrary distinctions which therefore have to be borne in mind in order to avoid "sending to Saint-Sauveur, which is essentially a ladies' bath, a case suitable for Aix-la-Chapelle, which is chiefly given over to the treatment of syphilis in men." As a temperate and practical exposition of the uses of baths and mineral waters this section of the work leaves nothing to be desired.

The concluding part deals with the therapeutics of climate and mineral waters under the headings of various diseases. Their application in cases of obesity, of metabolic disturbances, of heart disease, and various local diseases is

described. Under the heading of Tuberculosis are given the principles upon which depends the selection of a climate or of a sanatorium for different classes of cases.

Dr. Huggard's book represents the outcome of very considerable labour; it contains a large amount of useful and practical information in convenient form which it would be difficult to obtain elsewhere. The method he has adopted necessarily entails considerable repetition but this is an advantage from the point of view of facility of reference and, moreover, he is always clear in his statements and practical in his recommendations.

Pathogenic Micro-organisms, including Bacteria and Protozoa: a Practical Manual for Students, Physicians, and Health Officers. By WILLIAM HALLOCK PARK, M.D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College, and Director of the Research Laboratory of the Department of Health, City of New York. Assisted by ANNA W. WILLIAMS, M.D., Assistant Director of the Research Laboratory. Second edition, enlarged and thoroughly revised. With 165 engravings and four full-page plates. London: Henry Kimpton. 1906. Pp. 556. Price 18*s.* net.

THIS work possesses a distinct character and individuality which make the appearance of a second edition very welcome. Amongst the large number of text-books of bacteriology by American authors it is a relief to find one in which the introduction of purely scientific matter appears to be considered as well worth some slight loss of the hard practical efficiency which seems to be the ideal of most of those excellent works. There are, as might be expected, many evidences in the book of the connexion of the author with the Department of Health of New York and the incorporation of much original work done in the research laboratory of that department makes it differ from other text-books and gives it a peculiar value for the practitioner and health officer. As a consequence of this introduction of original work there appears to be an inequality in the treatment of the various subjects but the inequality is due rather to the fact that certain sections rise considerably above, rather than that the less conspicuous sections fall below, the level found in the average text-book.

An important feature of the present edition is the large section devoted to the protozoa the importance of which in the production of disease is now so fully recognised. The bacteriological section has been very thoroughly revised and brought quite up to date. The general plan of the book is that found in most text-books on the subject and of the early part of the work on the classification, cultivation, and general biology of micro-organisms little need be said except to point out that the chapters on practical disinfection and sterilisation are good and that in the consideration of the substances concerned in agglutination the results of much valuable work on the relations of the "group" to "specific" agglutinins are embodied. These results seem likely to be of much importance in differentiating and grouping members of that large and puzzling class of organisms to which belong the typhoid, dysentery, and colon bacilli.

Part II. deals with the pathogenic bacteria and opens with a chapter on Diphtheria which is full of information derived from personal observation and the work of investigators in the research laboratory. The best account of the pseudo-diphtheria bacilli and their relation to the virulent bacillus which we know is to be found here, and after full discussion the practical conclusion is reached that, "in this region (New York) at least, non-virulent diphtheria-like organisms retain their characteristics under various artificial and natural conditions and that they may be regarded from the public health standpoint as harmless." The author does not appear to accept Ehrlich's theories on the constitution of diphtheria toxin as proved.

The chapters on Tetanus and the Colon and Typhoid Bacilli are also important, and the statements made as to the relationships existing amongst the members of these latter groups, as determined by the agglutination test with sera from which the group agglutinins have been removed, are of interest. According to Dr. Park the members of the colon group do not constitute a distinct species as is the case with the typhoid bacilli, and the intermediate group is similarly divisible into a paratyphoid group—a distinct species—and a paracolon group containing several distinct species of culturally similar bacilli. In America the dysentery bacilli have attracted much attention and the more complete study of this group has led to the discovery of races which go far to bridge over the gap between the bacillus of Shiga and the colon bacillus. These intermediate organisms are grouped together as paradysentery bacilli. A long section is devoted to the bacillus tuberculosis. Very full directions are given for testing animals with tuberculin and for examining sputum for organisms associated with the tubercle bacillus with a view to prognosis; an estimate of the value of the results obtained is given. With regard to the vexed question of human and bovine tubercle, it is held that these bacilli represent very distinct races, so different, in fact, that it is possible to state that intestinal and mesenteric tubercle in children is largely due to bovine infection. The bacteriological examination of water occupies a short chapter, while a longer one deals with the bacteriology of milk in relation to disease, and much useful information acquired by the Health Department on the relations between the micro-organisms of milk and the summer diarrhœa of children is given.

The third part of the book, devoted to the diseases caused by protozoa, is written by Dr. Anna Williams, except the chapter on Malaria which is contributed by Mr. L. B. Goldhorn. This observer considers that it is possible from the morphology of the parasite to distinguish between recent infection and a relapse.

The book is well printed and the illustrations are well reproduced. In some cases the original photographs do not seem to be quite up to the standard of modern work. Dr. Park's book, since it does not simply add to the stock of text-books but contains much special information, may be strongly recommended to the serious student of bacteriology and public health.

A Practical Guide to the Administration of the "Nauheim" Treatment of Chronic Diseases of the Heart in England. By LESLIE C. THORNE THORNE, M.D., B.S. Durh. Second edition. London: Baillière, Tindall, and Cox. 1906. Pp. 75. Price 3*s.* 6*d.*

THIS little volume contains a good and full description of the details necessary in carrying out the mechanical treatment of chronic diseases of the heart. Dr. Thorne maintains that the "Nauheim" treatment can be efficiently administered in England, and in this book he gives minute directions as to how the baths are to be prepared and the manner in which the exercises are performed. In this edition he gives a good description of Schott's exercises and also illustrates the letterpress by means of 78 photographs, thereby considerably aiding those practitioners who have not actually seen the exercises demonstrated to understand more easily the necessary movements of the arms, the legs, and the trunk. These exercises are perfectly easy to learn but require some care in ascertaining whether the right amount of resistance is being exerted by the attendant, or, more important still, whether the movements are being made too rapidly. We are willing to grant that if these exercises are performed regularly and under skilled supervision the effect produced is quite as satisfactory as when they are carried out at Nauheim. As to the baths, we are not entirely convinced. It would be interesting

to have an investigation conducted as to the comparative effect of the baths carried out with 30 to 40 gallons of water heated to 97° or 98° F. on the one hand and with water containing from four to five pounds of Droitwich salt and from five to six ounces of calcium chloride heated to the same temperature on the other hand—that is to say, to ascertain whether the salutary effects are due to the temperature of the water or to the contained salts. The "carbonated effervescent bath" would then be similarly tried. Such comparative trials may have been made already but we are not aware of them. We have, however, seen several forms of artificial "Nauheim" baths and were not favourably impressed with them.

Dr. Thorne, however, has evidently taken much trouble in the preparation of the book and some benefit will probably be obtained by following out his directions in suitable cases, for the number of patients who might receive benefit by a visit to Nauheim and are unable, for various reasons, to go there must be very large. Systematic exercise is doubtless a valuable therapeutic measure in certain cases of chronic diseases of the heart and Dr. Thorne indicates the nature of such cases. We thoroughly agree with him when he says: "The selection of suitable cases for treatment by the Nauheim methods is of vital importance, as there is no doubt that to treat thus every sufferer from chronic heart disease, irrespective of degree or kind, is most unwise." To apply the same therapeutic measures to every case of heart disease can only result in bringing into disrepute a valuable method of treatment.

A Handbook of Medical Jurisprudence and Toxicology for the use of Students and Practitioners. By WILLIAM A. BREND, M.A. Cantab., M.B., B.Sc. Lond., of the Inner Temple, Barrister-at-Law. London: Charles Griffin and Co., Limited. 1906. Pp. 287.

THIS manual is intended primarily for the use of students and its scope should be sufficient for the ordinary pass examinations. Each branch of the subject has been dealt with in sufficient detail to enable the student to obtain a fair knowledge of forensic medicine. All the facts are clearly expressed but the letterpress is not over-burdened with illustrative examples or reports of trials. The whole work, however, is written in an interesting manner and should well serve the purpose for which it is intended.

The book should also be of value to the practitioner. To further that object Dr. Brend has made a successful endeavour to deal practically with those matters calling for the exercise of medico-legal skill and knowledge which are most likely to be met with in everyday clinical experience. To prepare evidence properly and to stand the test of cross-examination in criminal or civil cases may prove no easy matter, but in this handbook numerous hints are offered which will greatly assist the medical witness. Chapter XVII., entitled "The Obligations, Statutory and Moral, of the Medical Man," is of especial interest. A practitioner has many duties besides those of tending and healing the sick. Some of these—such as notification of infectious disease or certification of death—are imposed upon him by statute under pains and penalties for the non-performance thereof; others—as, for instance, the obtaining of a dying declaration from a wounded person or the assistance necessary to prepare a will in an emergency—have only a moral sanction for their performance. Circumstances of this nature are constantly occurring in ordinary practice and the precise methods of dealing with all such eventualities require to be known thoroughly. In the chapter now under consideration these points are dealt with *seriatim*. The directions and comments are brief and concise and we believe are perfectly trustworthy. The remarks on "When to refuse to certify or to inform the coroner of a death" are especially worthy of attention.

Another matter of considerable interest which naturally receives notice is that of malpraxis—that is to say, failure to exercise "reasonable skill and care in the treatment of a patient." A medical man is not, of course, expected to be infallible and cannot be held responsible for *bonâ fide* mistakes in either diagnosis or treatment, provided the errors are such that any prudent practitioner might in the circumstances have made and that no negligence has been displayed. Some cases are quoted which show the class of action likely to be brought against a medical practitioner for actual or supposed malpraxis. The various medical defence societies are doing most valuable work in protecting their members against such actions.

The question of professional secrecy receives due attention, as does also the subject of "undue influence."

We have perused the book with interest and can recommend it as a trustworthy work on medical jurisprudence and toxicology and one especially suitable for students and practitioners of medicine. Many of the works on forensic medicine are written with a view to being useful to members both of the medical and the legal professions, thereby rendering the books themselves bulky and any desired piece of information perhaps somewhat inaccessible on account of the large number of cases which are quoted, often in considerable detail. In this handbook, however, the necessary facts only are stated and consequently its contents will be more acceptable to those for whom it is intended.

Annual Report of the Veterinary Department of the Board of Agriculture and Fisheries for the Year 1905. Printed by Darling and Son, Bacon-street, E. 1906. Price 1*s*.

THE report is, as usual, divided into two parts: the report of the chief veterinary officer and that of the assistant secretary of the animals' division. From the combined reports we gather that at length swine fever has very materially decreased and that the number of outbreaks reported is considerably less than that of any preceding year. Thus, whilst in 1885 70 counties were affected and 7926 outbreaks were reported, with a total of 38,798 pigs attacked, in 1905 we find only 87 outbreaks reported and 3876 swine slaughtered as diseased or as having been exposed to infection. The decrease in the number of outbreaks of swine fever in Great Britain since the year 1901 has been continuous and the improvement has been shown in all parts of the country. It is also noticeable that in counties where the disease is still present the outbreaks are confined to much more circumscribed areas. By the application of the Swine Fever Order of 1903 to a county or group of counties, together with the suspension of the existing local regulations, the free movement of swine can be permitted throughout the entire area, whilst general restrictions can at once be imposed where such a course is necessary for the prevention of the spread of the disease. Sheep scab has also been successfully dealt with and shows a very material decrease. In England only 422 outbreaks were reported, as compared with 644 in the previous year; in Wales, 406, as compared with 708 in 1904; and in Scotland, 90, as compared with 66, making a total decrease for the whole of Great Britain of no fewer than 500 outbreaks. This is attributable largely to the increase in the practice of dipping.

In regard to glanders, the returns for the year show that there were 315 less outbreaks than in 1904, 590 fewer horses being returned as attacked by the disease. Apparently it is only now the question of obtaining money from the Treasury funds which is keeping the Board from adopting stern measures by which it is hoped to eradicate this fatal disease of horses and man. It is purely a question of fair and reasonable compensation to be granted to owners for all horses slaughtered as being in-contact animals

and only proved to be diseased by the mallein test. It has not at present been found possible to obtain the necessary funds and it is to be hoped that it will not be long before the Government will see its way to grant these. Epizootic lymphangitis has been effectually checked and it is gratifying to read that only 19 cases have been met with outside the animals of the Army Veterinary Department. Anthrax shows only 907 outbreaks as compared with 1049 in 1904, but it is pointed out that the total number still exceeds considerably the total of any year since 1897 and, as stated by the assistant secretary to the Department, the control of this disease cannot yet be regarded as placed on a satisfactory basis. Parasitic mange and swine erysipelas each receive individual mention and it is with the greatest gratification that we note the entire absence of the heading of the word "rabies," this disease now being legitimately considered as extinct in Great Britain.

In conclusion, it may be said that the work of the Veterinary Department of the Board of Agriculture and Fisheries has been beneficial, both from the professional and the administrative aspects, to the stock owners and to the public at large.

Handbuch der Geburtshülfe. (*Handbook of Midwifery.*) In three volumes. Edited by F. VON WINCKEL. Vol. II., Part I., pp. x.–653; Part II., pp. xii.–798. Glasgow: F. Bauermeister. Wiesbaden: J. F. Bergmann. Price 14*s.* 9*d.* and 18*s.* 8*d.* respectively.

THE appearance of the second volume of this important work will be welcomed by all who are interested in this branch of medicine. The complete work is destined long to remain a classic so far as the practice of German obstetricians is concerned.

The first half of the second volume opens with an article from the pen of the editor continuing his previous review of the history of gynæcology from the sixteenth to the eighteenth centuries and including a part of the nineteenth century. The succeeding articles are concerned with the physiology and dietetics of the puerperium and of the newly born infant. In his article on the puerperium Knapp discusses its physiology, the changes taking place during the process of involution of the genital organs, the care of the patient during the lying-in period, the diagnosis of this state, and its relations to medico-legal medicine. The important physiological processes which occur in the organs of the newly born infant in the period immediately following birth and the many important questions concerned with the study of metabolism at this period of life are discussed in detail by Seitz. The fourth section of the whole work is taken up with the Pathology of Pregnancy and its Treatment. This part of the book includes sections by Schaeffer on the Disturbances of Nutrition during Pregnancy, by R. von Braun-Fernwald on Prolapse of the Pregnant Uterus, by von Winckel on Hernia of the Gravid Uterus, and sections by Wertheim on Pregnancy complicated by mal-developments and anomalies in the position of the pelvic organs, myomata, carcinomata, diseases of the appendages, new growths, and extra-uterine gestation. Diseases affecting other parts than the genital organs are described by Freund, Meyer-Rügg, and von Winckel himself. We are surprised to find no mention of diseases of the heart in the last section; possibly this may be considered in a subsequent volume. The plan of dividing up these various subjects amongst a number of writers leads not infrequently to some repetition and greatly increases the length of the work. This can hardly be avoided and even if it could one of the most important features of a work of this kind is the opportunity which it affords of ascertaining the views of different authorities on the same or allied subjects.

The second half of the second volume opens with a consideration of the abnormalities and diseases of the fœtus during pregnancy. The first chapter on Extra-uterine Gestation is written by R. Werth and extends to some 360 pages. It is a monograph of the greatest value in which the whole subject is discussed in great detail and with a commendable appreciation of the work of others. In a handbook which contains many articles of the greatest interest this one is pre-eminent for its comprehensiveness and clearness. The author is certainly a master of his subject. The diseases of the membranes of the ovum are dealt with by Seitz who also discusses the affections of the placenta, including tubercle and syphilis and anomalies of the cord. Premature detachment of the normally and abnormally situated placenta is described by Hofmeier in the following chapters. His well-known views as regards the origin of placenta prævia are given at length and this chapter is worthy of careful study, illustrated as it is by a number of important drawings.

The next section on the changes occurring in the fœtus and placenta after the death of the ovum and missed labour and abortion is from the pen of Seitz. He also describes the etiology and mechanism of abortion and premature labour, which is further discussed by Chazan in the following chapter entitled, "The Occurrence, Course, and Treatment of Abortion." Here, again, there is necessarily some overlapping. The last chapter, by Schaeffer, is on Injuries, Traumatisms, and Operations during Pregnancy.

One of the chief features of the book is the very complete list of references which is given at the end of each article, and these should prove of great assistance to many workers on the various subjects. The whole well maintains the high standard set in the first volume and we hope that the remaining volume may follow these two as rapidly as possible. The book is one that should be in the possession of everyone engaged in teaching obstetric medicine.

JOURNALS AND MAGAZINES.

The Bio-Chemical Journal. Edited by BENJAMIN MOORE, M.A., D.Sc., and EDWARD WHITLEY, M.A. Vol. I. Nos. 6 and 7. June, 1906. Published by the Bio-Chemical Department, Johnston Laboratories, University of Liverpool; issued monthly. Price 15*s.* per volume.—This part contains the following articles: 1. Secretions by the Renal Tubules in the Frog, by F. A. Bainbridge, M.D. Cantab., and A. P. Beddard, M.D. Cantab. The authors, as the result of their experiments, suggest as a working hypothesis in regard to the secretions of urine that both the glomerular and tubular epithelia definitely secrete urine and in all probability both can secrete similar constituents in solution. When the quantity of fluid to be secreted from the blood is comparatively small the urine represents the secretions of the tubules because the epithelium covering the glomeruli is insignificant in extent as compared with that of the tubules, but when large quantities of water and salts have to be passed out the glomeruli are the active agents. During saline diuresis the urine approximates more and more to the composition of the blood *minus* proteid, whereby the maximal amount of material is excreted with minimal expenditure of energy by the kidney cells. Increased blood-flow facilitates the discharge of fluid by the glomeruli, but this can take place independently of the vascular changes. 2. A Study of the Pathological Variations in the Acidity of the Gastric Contents, especially in relation to malignant disease, by Benjamin Moore, D.Sc, W. Alexander, M.D. R.U.I., R. E. Kelly, M.D. Liverp., and Herbert E. Roaf, M.D. Toronto. These observers find that the percentage of hydrochloric acid is very sensitive to the general condition of the body and is generally reduced in all cases of illness or enfeeblement. In malignant disease the drop in acidity is especially pronounced and in

the majority of cases free hydrochloric acid is entirely absent; the reasons of this are given in detail. 3. A Clinical Method of Hæmalkalimetry, with applications to determination of the reactivity of the inorganic salts of the serum in malignant disease and other conditions, by Benjamin Moore, D.Sc., and Fred. P. Wilson, M.B. Vict., an article containing the results of much patient research. 4. The Physiological Action of Ethyl Chloride, Bromide, and Iodide, and of Somnoform, by W. Webster, M.D., of Winnipeg. 5. The Effects of Antitoxic and Anti-bacterial Sera on the Opsonic Powers of the Blood, by Warrington Yorke, M.B. Liverp., and C. Harold Smith, M.B. Liverp. 6. A Study of the Influence of Nitrite of Sodium on Animal Metabolism, by N. F. Surveyor, B.Sc.

The Ophthalmoscope. Vol. IV., No. 7, July 1st, 1906. Edited by SYDNEY STEPHENSON (London) and CHARLES OLIVER (Philadelphia). Sub-editor, C. DEVEREUX MARSHALL. London: Pulman and Sons. Price 1*s.*—The contents of this number of the *Ophthalmoscope* are: 1. An article by T. Harrison Butler, M.D. Oxon., describing two new operations for Trichiasis. In one of these the misplaced row of lashes with their follicles is excised and a portion of the mucous membrane of the lower lip is adapted to the wound. No sutures are employed. In the other a modified Spencer Watson operation is performed, a triangular portion of the skin flap is removed from the upper border, which border is sutured to the skin above carrying with it the misplaced cilia. The gap left below is filled up with mucous membrane from the lip. 2. The Use of Adrenalin in Spring Catarrh, by Harold C. Grimsdale, F.R.C.S. Eng. 3. Professor R. W. Doyne describes a case of Retinitis Circinata which is illustrated by a chromolithograph. 4. Mr. Richard Gompertz supplies a note on a case of Albuminuric Retinitis simulating Optic Neuritis. 5. A translation by Dr. Percival Hay of a case described by Dr. Segalowitz of Stuttgart is given in which a Pigmentary Nævus of the Choroid was observed in a girl, aged 11 years. In addition to one large mass there were 25 other smaller ones. 6. A description of a New Binocular Coupe with Electric Light, devised by Dr. Berger. In addition to extracts and notes on current literature there is a symposium upon Cataract Extraction, in the course of which the opinions of Professor Fuchs, Professor Haab, Professor Uhthoff, and Professor Axenfeld are given.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., W. F. R. WELDON, F.R.S., and SYDNEY J. HICKSON, F.R.S. With lithographic plates and figures in the text. Vol. L., Parts I. and II. New Series, Nos. 197 and 198. April and June, 1906. London: J. and A. Churchill. Price 10*s.* net each.—The articles contained in the April part (the first quarterly part of a new volume) are: 1. The Life-cycle of Diplodina (Cystobia) Irregularis (Minchin), together with Observations on other Neogamous or Early Conjugating Gregarines, by H. M. Woodcock, D.Sc. Lond. The diplodina irregularis is a gregarine that is parasitic in holothuria forskali, the "cotton spinner" of the south-western coast of England; another, diplodina Minchinii, Woodcock, is parasitic in cucumaria pentactes and cucumaria planci. The diplodina irregularis lives either in the lumen of, or attached to, the blood-vessels. It is never free in the cœlom. The diplodina Minchinii inhabits the respiratory trees. It is never in the intestinal vascular system. The former enters the host by the mouth and the latter by the cloacal aperture. The gregariniform adults of both species are ovoid and motionless. Each adult is really a couple, diplodina being a neogamous gregarine, or one in which precocious association occurs. The cytoplasm has a typical gregarinoid structure. The nucleus possesses a distinct chromatic reticulum in which is suspended a single karyosome. With growth the karyosome becomes vacuolated and divides up in the nucleoplasm. The fragments become incorporated with the chromatin of the nucleoplasm. The earliest nuclear divisions are completely amitotic. All the cytoplasm is utilised to form the gametes or primary sporoblasts. Spore and sporozoite formation in diplodina irregularis follows the usual plan of development. 2. The Anatomy of Oncholaimus Vulgaris, Bast., with Notes on Two Parasitic Nematodes, by F. H. Stewart, M.A., B.Sc. St. And., M.B. Edin., Lieutenant, I.M.S. The oncholaimus vulgaris is a free-living nematode and its structure is compared with a parasitic form ascaris clavata, Rud., and Lieutenant Stewart also describes an embryo of a parasite to connect the two, if possible. 3. The Hæmoflagellates: a Review of Present Knowledge relating to the Trypanosomes and Allied Forms, by H. M. Woodcock, D.Sc. Lond., with figures in the text. This is the first part of a long and carefully drawn-up memoir by Dr. Woodcock on the blood parasites belonging to the class mastigophora which are found in the blood of vertebrate animals, opening up or extending many lines of inquiry that are of far-reaching interest in regard to the possible production and development of infectious disease in man and various vertebrate animals.—The number for June contains three memoirs. 1. The Hæmoflagellates, a Review of Present Knowledge relating to the Trypanosomes and Allied Forms, by H. M. Woodcock, D.Sc. Lond., with 41 text figures. This memoir is a continuation of one in the preceding part and describes the multiplication of these hæmatozoa; the life cycle of trypanosoma Ziemanii as compared with that of trypanomorpha; an account of the Leishman-Donovan-Wright bodies; their phylogeny and evolution, their systematic enumeration, and their relation to the spirochætæ from which the author regards them as being widely separated. There is also appended to the memoir an excellent bibliography of no less than 152 separate papers, works, and articles devoted to the consideration of these and allied blood parasites. 2. Notes on the Development, Structure, and Origin of the Median and Paired Fins of Fish, by Edwin S. Goodrich, F.R.S., with five plates. Mr. Goodrich shows that the development of the median dorsal fins is essentially similar to that of the paired fins. They, like the paired fins, arise as longitudinal folds into which grow buds from the myotomes. Fourteen or sixteen myotomes contribute to the fin each one muscle-bud along the greater part of the dorsal fin; each muscle-bud becomes converted into one radial muscle. The nerve plexus of the fins is composed of intertwining sensory fibres, along or through which the motor fibres proceed to their destination without mixing with those of other segments. There is probably no real motor plexus but the motor nerves may be gathered together with more or less longitudinal *collectors* and become again sorted out on reaching the musculature. Such collectors are found at the base of the dorsal fins. It was determined with absolute certainty that the stimulation of one nerve does not produce a general contraction of the muscles of the fin but only of a limited portion of the musculature corresponding in position to the nerve. The plates give good representations of the distribution of the spinal nerves distributed to the fins. 3. Preliminary Account of a New Organ in Periplaneta Orientalis, by Ruth M. Harrison, Lady Margaret Hall, Oxford, with a plate. The organ is bilobed, of gland-like structure, a lobe lying on each side of the nerve cord between the fifth and sixth abdominal ganglia. It opens below to the exterior by a single aperture on the ventral surface of the animal between the sixth and seventh sternites. It is found in both sexes and in the male measures about two millimetres in length.

Biochemische Zeitschrift. Parts I. and II.—The continually increasing importance of a right understanding of the chemical processes that accompany manifestations of life has led to the formation of a special department of chemistry to which the term "biochemistry" has been applied. The

Germans as usual, patient and persevering, are attacking the problems that are presenting themselves with the greatest energy. That their labours may not only be preserved but may also be readily accessible and that future inquirers may not have to hunt through many volumes and pages of journals largely devoted to collateral subjects, a journal has been established with the title of "Biochemische Zeitschrift" under the editorship of Professor C. Neuberg of Berlin and we have received the first and second parts which have been published in June of the present year. The topics the consideration of which will be embraced in the journal are various, the prospectus stating that the editor means to include physiological and pathological, as well as physical chemistry, the physiology of plants, bacteriology, inquiries into the nature of immunity, pharmacology, experimental pathology, veterinary investigations, agricultural work, and the like which offer a sufficiently wide field of research. Many leading names are to be found in the list of promised contributors, such as those of Bang, Blumenthal, Galeotti, Hamburger, Kumagawa, Liebermann, Maudel, Michaelis, Nernst, Salaskin, Starling, Traube, Vandevelde, and others; those who particularly coöperate with Professor Neuberg being Buchner, Ehrlich, C. von Noorden, E. Salkowski, and Zuntz. The publisher is Julius Springer of Berlin and the price of each volume, which will consist of six parts, is 12*s*.

New Inventions.

A MODIFICATION OF LEITER'S URETHROSCOPE.

IN common with many of my fellow surgeons I have for some years past been in the habit of using the instrument designed by Leiter of Vienna for illuminating the urethra. Although this instrument is admirable in many respects I have lately been using a modified form (*vide* illustration), and its superiority is so marked that I venture to bring it to the notice of my colleagues. The illumination (which when examining a dark red canal can never be too great) has been much increased by the juxtaposition of a high candle power lamp and a condensing lens which concentrates nearly all the light obtainable from one side of the

lamp upon the upper part of the reflecting mirror. This condensing lens greatly increases the amount of light obtainable and when used in conjunction with the special lamp and set at its proper angle and distance from the mirror gives such a strong white light that the texture of a piece of cloth or the convolutions on the skin of one's finger can be instantly and easily distinguished at the end of a long urethral tube. In Leiter's model only comparatively few of the diverging rays are utilised—viz., those which fall on a small area at the upper part of the mirror. In the new instrument the rays from one side of the lamp are concentrated on this spot by means of the lens. This area, which should be of about the size of a sixpenny-piece, should have one-third of the circle missing—i.e., the rays passing over the top of the mirror. The pattern of the pencil of light thrown into the cannula can easily be seen on the glass window of the nose-piece (it should be of a size slightly larger than the diameter of the urethral tube). The handle has been dispensed with, as in Fenwick's model, for although preferred by some for a simple examination it is better to grasp the body of the urethroscope when any instrumentation through the cannula is necessary. The cannula is thus much more under the direct control of the hand and the presence of the handle affects the balance and the delicacy of the manipulations. The square shape of the modified instrument affords a firmer hold and one of the projecting screws of the lens carrier, falling naturally between the first and second fingers of the hand, a perfect grip and balance are obtained. The mirror can be moved freely, and when the position reflecting the maximum illumination down the speculum has been found it can be fastened firmly in place by means of a small screw-head projecting behind it upon the back of the instrument and therefore well out of the line of sight. In the old model the mirror, which was usually kept more or less loose for focussing purposes, frequently moved whilst operating by its coming into contact with cotton-holders, forceps, &c., thus plunging the part into darkness at a critical moment. All minor details have been carefully arranged. The window of the nose-piece, which now can be opened at will by a spring arrangement, was designed by me about ten years ago; it is now fitted to all Leiter's models, has the spring catch on the right side as the urethroscope is held with the left hand in all intra-urethral manipulations; the lamp has been obliquely placed and the filament arranged to obtain the best possible result. Those who have urethroscopes of Leiter's or Fenwick's pattern can have the condensing lens and special lamp fitted to them; the illumination is greatly increased by these means, and the lamps are quite inexpensive. The new instrument is fitted with von Antal's arrangement for distending the urethra with air. I would like to mention also that my friends to whom I have shown or lent the instrument have stated that they had hitherto been working in a comparatively dim light and that this illumination was quite a revelation to them. I have to thank Messrs. Down Brothers for so successfully carrying out my ideas and for producing an instrument which is not only simple and handy but practical and efficient, and which will go a long way towards popularising this method of treating chronic urethral diseases.

W. WYNDHAM POWELL, F.R.C.S. Eng.

Cavendish-place, W.

A NEW RETRACTOR.

THIS retractor, made for me in two sizes by Messrs. White and Wright of Liverpool, is designed for use in pelvic operations but it may be of service in almost any abdominal procedure where the retraction of important organs is neces-

sary. It is very light, being made of stout wire, shaped as shown in the figure. I have found it very useful in holding forward the uterus to enable me to secure bleeding points in the pouch of Douglas after the removal of an adherent ovary and tube.

Liverpool. W. BLAIR BELL, M.D., B S Lond.

SANATORIUMS FOR WORKERS.—On July 14th Princess Christian laid the foundation stone of the first sanatorium to be erected by the National Association for the Establishment and Maintenance of Sanatoria for Workers suffering from Tuberculosis. The site of the building is at Benenden, Kent, where Her Royal Highness was received by Mr. C. H. Garland, the chairman of the association, and by the honorary officers. In the course of the address to Her Royal Highness Mr. Garland stated: "The sanatorium is the first of what we hope will be a number, destined to supply the wants of the workers who are suffering from tuberculosis. Apart from the accommodation for pauper cases there are not more than 3000 beds provided for the open-air treatment of consumption in this country. We have secured an estate of 250 acres and the present building is placed at a height of 230 feet above the sea level, on a slope that faces south-westward, and, as your Royal Highness is able to see, the outlook is extensive and beautiful. We are assured by our expert advisers that it fulfils all the essential requirements of a sanatorium site." The service was conducted by the Bishop of Dover.

THE LANCET.

LONDON: SATURDAY, JULY 21, 1906.

Should Nurses be Registered?

THE question of the nature and amount of the recognition to be extended to duly trained nurses is one which has greatly exercised the minds of many estimable people, both in and out of Parliament, and on it, there can be no doubt, different opinions may easily be supported by at least a semblance of argument. Medical men, for example, are known to be quite divided in opinion upon the matter. A large proportion of "fully trained" nurses maintain, and many of the matrons and other ladies who have been responsible for their training maintain perhaps even more strongly, that the instruction which they have received is of such a character as to deserve recognition and even protection from the State, in order that the public, as in the case of the medical profession, may at least be enabled to distinguish qualified from unqualified nurses when, if such be their pleasure, they may give their confidence only to the former. A registration by the State and a registration by the Royal British Nurses' Association have each had their advocates, advocates of whom it may, perhaps, be said that the so-called "claims" of the nurses have not been wholly free from a tendency to obscure, in their minds, the convenience and welfare of the institutions or classes by which nurses are chiefly employed. We do not in the least degree blame the champions in question for aiming at all that they can get, or even at a little more than is likely to be conceded to them; but our very tolerance of this position renders it the more necessary that the demands which have been put forth on behalf of nurses should be somewhat jealously scrutinised and that the consequences likely to follow from granting them without reserve should be thoroughly understood by all who are concerned.

A very important difference between the sexes, which in this particular instance should certainly not be overlooked, arises from the fact that a man, who becomes qualified as a member of any profession or calling, usually depends upon it for his livelihood for the remainder of his days, and continues to practise it, with the necessary consequence that his knowledge is kept alive and in working order. A woman, on the other hand, is always liable to be diverted from any special occupation by marriage and by consequent claims of domestic and maternal duties, and it is evident that in a calling like nursing, which affords only a slender remuneration and makes close and constant demands upon the time, it would seldom be possible for a married woman to continue its practice. If every trained nurse were put upon a State register, which was supposed to afford proof of her fitness for the duties of her calling, it would inevitably happen that a certain, even a large, proportion of the persons so registered would soon abandon that occupation on account of the claims of marriage, and would thus, either temporarily or permanently, fall out of the ranks of the calling which they had embraced. A certain proportion of them would afterwards be compelled, by widowhood or by adverse circumstances, to seek to return to their original pursuit; and any kind of professional register which failed to distinguish between nurses who had continued in practice, whose knowledge had been kept up to the high-water mark by regular exercise, and nurses who had been effectively instructed at some remote period and had since had opportunities of forgetting whatever they had known, would certainly be a document calculated in some instances to mislead. On this ground alone, if on no other, we must agree with the "Memorandum" issued by the Central Hospital Council for London in its declaration that registration, as ordinarily understood, would fail to enable the public, when engaging the services of a nurse, to distinguish between one who was efficient and one who was not. It would, of course, fail still more completely in enabling the public to discover the presence or absence of the special qualities or the special experience which render a nurse peculiarly fit for the charge of certain classes of cases, as, for instance, for the care of children or of the aged. A medical man, in selecting a nurse for a patient, would still have to be guided either by his own previous experience of her work or else by the description of her character and capabilities which he received from the responsible official of the hospital, society, or other organisation with which she was connected, for this sort of information could not be supplied by any official register.

The "Memorandum" of the Central Hospital Council, to which we have referred above and which bears on behalf of the council the signature of Sir HENRY HARBEN as chairman, is distinguished by the common sense and practical shrewdness naturally to be expected from that strong man and capable organiser; and it forcibly calls attention to the effects which would follow if some of the more exaggerated claims which have been made on behalf of "trained" nurses were admitted by the legislature. The "Memorandum" states that Sir VICTOR HORSLEY and Dr. LANGLEY BROWNE, speaking for the British Medical Association before the Select Committee of the House of Commons, suggested that it should be a legal offence for any woman to engage in nursing who had not been *fully* trained, and it supplies arguments for disagreeing with the views thus expressed. For it points out that, if the law were as the representatives of the British Medical Association would have it, a very large number of nurses, many of whom are giving satisfaction to their employers and to the public, would be prevented from earning their livelihood. It points out, further, that, while the work of some imperfectly trained nurses is bad, this is not true of the greater number of them, while the inferiority of service often arises from causes quite unconnected with any lack of technical training. Again, it may often be of importance to the poor to be able to obtain the services of a nurse who is willing to accept a lower rate of pay than is demanded by the fully trained, a position that could not be considered under a registration scheme.

The authors of the "Memorandum" have not been content

with merely negative criticism and, after calling attention to the defects which would be inseparable from any system of registration and to the fallacy inherent in any comparison between the training of a nurse whose knowledge must often be secondary in importance to her personal character and the education of a medical practitioner, they proceed to suggestions for meeting the recommendations in the report of the committee of the House of Commons. That is to say, they show how the employer of a nurse, whether medical man or layman, may satisfy himself as to her training, and they propose also to obviate the alleged difficulty which may arise from a nurse being sometimes unable, owing to a change of officials or other causes, to obtain a record of her training. For the attainment of these objects they recommend that an Official Directory of Nurses should be instituted and maintained by State authority, and that every nurse who had been trained at a training school for nurses not carried on for private gain should be entitled to an entry in this directory, showing her name, the places, dates, and periods of her training, the nature and dates of any certificates which she may have gained, and any hospital appointments which she has subsequently held. Removal of a name from the directory should be consequent upon death, upon conviction of any criminal offence, upon notice that the person concerned had ceased from nursing, or upon failure for a specified time to respond to official communications. The publication of such a directory would, it is maintained, accomplish all that is really necessary, either in the interests of the public or in those of nurses, and would avoid many objectionable complications. The directory would leave each training school at liberty to develop its teaching on the lines best suited to its circumstances. No system of compulsory examination, with its attendant difficulties and evils, would be instituted. The real employer of a nurse—that is to say, the medical practitioner—would be able to ascertain from the directory the bearing of her training upon her fitness for the case for which she was required, while the public could learn whether a nurse's statements as to her training were accurate, and also, in most cases, where to seek for further information if it were desired. No deceptive pledges of efficiency would be given by any public institution, and no woman with an aptitude for nursing would be hindered from affording to the sick such services as she was able to render and they were willing to accept, or from receiving such modest remuneration for her work as she might be in a position to command. The conditions thus indicated would seem to make for the greatest happiness of the greatest number and, while they would leave the "trained" nurse in undisputed possession of the distinctions which she had earned, would place no artificial difficulties in the path of her humbler, but often not less useful or less willing, sister.

The Adulteration of Imported Food.

AN important decision of the Divisional Court affecting the position of importers of articles of food has now been carried into effect by Alderman Sir J. RITCHIE sitting to re-hear a summons which he recently dismissed subject to the stating of a case for the consideration of the High Court. The summons was taken out by the Customs authorities in respect of the importation of 127 packages of butter by the defendants, Messrs. LONSDALE & Co., Limited, which were adulterated with foreign fat but were not marked in accordance with Section 1 of the Sale of Food and Drugs Act, 1899, so as to indicate their character. The defendants at the original hearing, which took place in January, did not deny or dispute the fact that the butter was not pure butter, but pleaded in defence that they had purchased it under a warranty that it was pure and of a kind known as control butter—that is to say, that it was produced under the control of the Dutch Government. As to this, again, there was no dispute, and the honesty and good faith of the defendants in the matter were in no way doubted, but the point was taken that the defence of warranty from the vendor, which can be raised under the Sale of Food and Drugs Act where the parties to the transaction both trade in the United Kingdom, does not apply to the case of an importer buying from a person abroad. The Alderman, when he heard the summons originally, was of opinion that the defence of purchase under warranty applied to both classes of case, but the Customs authorities, not being satisfied, appealed and the Divisional Court has since upheld their contention. At the recent re-hearing it was intimated on behalf of the defendants that they had other defences which they were prepared to raise but which they had abandoned at the first hearing in order to rely upon the defence which had now been decided to be bad. They were therefore willing to plead guilty to an offence under the Act, but they urged through their counsel that it was of a technical character, committed in ignorance of the construction which would be put upon the law, and relying upon a false warranty given to them by dishonest persons. The Customs authorities did not press the matter or dispute the good faith of the defendants and the Alderman acceded to the views of both parties and inflicted a nominal penalty of 10*s.* with £3 3*s.* costs. Upon this the defendants are to be congratulated. They had the protection afforded by a good reputation for honest trade and it would have been a hardship for them had they been treated as dangerous culprits when they were no doubt the victims of unscrupulous and deceitful dealers abroad. At the same time the public are to be congratulated also that the law stands as the Divisional Court has decided, for the distinction between the purchase of food materials at home and the responsibility attaching to the obtaining of similar goods abroad is not an unreasonable one. When the sale takes place in the United Kingdom a fraudulent or an untrue warranty is likely to bring serious consequences upon the head of him who gives it and this fact is calculated to prevent its being given. The institution of legal proceedings, whether civil or not, against a firm abroad is a more difficult and a more costly matter, and the probable immunity is not unlikely to tempt dishonest people. Importers, moreover, usually deal upon a tolerably large scale, and if, in the absence of protection by a warranty, they find it advisable to examine independently the goods which they buy they are likely to be able to afford the cost of doing so. In any case such independent examination is a protection to their customers. In this particular instance it may be pointed out that the Customs authoritie instituted the proceedings, so that the

defendants presumably had not had the opportunity of testing for themselves in this country the quality of the butter consigned to them.

Motor Traffic Offences.

EVERYONE is saying perpetually that the motor omnibus has come to stay. Public opinion, however, may well decide otherwise, and be entitled to do so, if the motor vehicles now upon the London streets are not improved in many fundamental directions. Many of us have learned with some surprise during the last few days, days during which the papers have reported sad accidents owing to motor omnibuses, that the companies owning these vehicles have it entirely in their own hands to crowd suddenly any hitherto peaceful roadway with a busy service of noisy, petrol-reeking wagons, shaking the houses to their foundations, filling the air with an abominable stench, disseminating around them clouds of dust, and raising a clatter with their gear which makes all rest, all work, all peace alike impossible to those who live upon the track along which they pound their vehement and offensive way. The state of things now admitted to exist in some of the best residential parts of London is intolerable and opposed altogether to common justice. It is said that at the present time the public is undergoing an unpleasantness incidental to an experimental stage. But why should this experimental stage be inflicted on the public in this nauseous manner? If the omnibuses are not in a state to be put on the thoroughfares they should be excluded until they are perfected. Surely the cheap and expeditious way with which the motor omnibus performs its journey cannot be held to compensate for the foul smells which it leaves behind it and the hideous scroop of its brakes and gearing. We are told that the motor omnibus as a means of locomotion is a success, a proof of which is seen in the great numbers of people who patronise this method of travelling. We have no doubt at all that many people find the motor omnibus convenient, cheap, and quick for getting to and from their places of business, but the very places of business themselves threaten to be shut up if the evil odours and noises which it scatters far and wide are not soon remedied. We appeal to the motor engineer to turn out something better than he is doing now or disaster must fall upon his industry. And if the engineer can do no better than the present examples of construction show we hope for a prompt administration of the laws which protect the well-being and health of the community.

We have frequently called attention in these columns to the prejudice to the health and the comfort of the people of London which was threatened by the impending change of horse traffic to motor traffic. At first sight it might have been thought that this change would improve the sanitary condition of the streets. It is doubtful whether at present this is the case. The old pollution arising from the presence of hard-worked horses in the streets threatens to give way to a new pollution which may have even more marked and more widespread prejudicial effects on health. We cannot forget that the combustion of petrol in the motor engine is seldom perfect and the output of poisonous gases, amongst which may be included carbon monoxide, is considerable. Besides, there are quite large quantities of petrol vapour constantly escaping into the streets and petrol is undoubtedly a poison. Then there are the fumes arising from the overheating of the lubricating oil, an event, we believe, which is regarded as a sign that the driver is not the master of his engines. Lastly, there is the intolerable noise of the engines and the gear, with the torture that they mean to the nervous, the delicate, and the invalid. Altogether, the conclusion cannot be resisted that the motor omnibus—in its present shape, at all events—ought never to have been put upon the streets, and unless improvements are rapidly made which remove these intensely disagreeable characteristics they should be refused the qualification of common carriers on the KING'S high road. The facts that they are offensive to our senses and destructive to property make up a serious indictment which calls for serious treatment. The fact that they are a menace to health is a still more urgent matter. We appeal again to the motor engineer to design something better. We are certain that he has not done his best yet and we have a shrewd idea that the reason of this is that he is not given sufficiently liberal estimates. All the amenities of life must not be outraged that so-called pioneers of quick transit may pocket dividends.

Mr. Haldane's New Army Reform Scheme.

ON Thursday, July 12th, Mr. HALDANE expounded his new army policy and war scheme to a very full House in a speech of nearly three hours' duration. The speech was an outspoken and powerful statement of a proposal to increase the efficiency of our army and yet to economise in the sums to be provided for its upkeep by certain important reductions. As regards the Army Medical Service and army medical matters we are glad to notice that the War Minister adopted an earnest and sympathetic tone. The problems involved in Mr. HALDANE'S system of army reorganisation are so many and so complicated that it is not easy to get an accurate and at the same time comprehensive view of his proposals. There is, of course, a broad and general political side to all schemes of army reform, with which we are not directly concerned, except that an efficient army means security and peace, while insecurity or war necessarily has the most disastrous effect upon scientific progress. But with the health of the army and whatever appertains thereto we have direct business. It is not so easy as might at first sight appear to keep the distinctions between the general subject and the particular heading apart; they have a tendency to overlap. As a case in point, Mr. HALDANE dwelt with some legitimate pride and satisfaction on the fact that the South African War showed the resources of our Empire, and proved that so long as certain conditions remain fulfilled we may rely in a supreme emergency on the whole strength of that Empire. Well, this may be so, but the war also proved to all medical men the complete lack of proper provision made by the Government and by the predecessors of the Government for proper medical organisation. It is not the keenness and willingness of people to fight, but their preparedness for war that is the problem; and we make bold

to say that our medical service is not properly prepared and organised at the present time to take the part that it should in any really big war. What will be required in future is not so much, perhaps, a defensive home army as the organisation of some scheme for an Imperial army with an Imperial medical service as a component part thereof, which shall be more in harmony with the new and altered conditions of the British Empire. We do not despair of some scheme of this kind being initiated at the forthcoming conference of the colonial delegates next year. Mr. HALDANE spoke words of admirable sense in his references to the health of the army, and the views and intentions of the Government in regard to the medical, sanitary, and hospital services in time of war will have been carefully read and studied by all concerned. He enumerated briefly but correctly the chief sources of disease in an army on field service, and stated how it was proposed to deal with them respectively, giving a very brief outline of a scheme, already partly in operation, drawn up for that purpose by Sir ALFRED H. KEOGH, the Director-General of the Army Medical Service. Taking all this into consideration we find that Mr. HALDANE'S proposals as a whole are indicative of a sincere and earnest purpose to improve our army as a fighting machine, to insure for it better medical equipment, and at the same time to save the public purse. It is inevitable, however, that his scheme should come in for severe criticism from military authorities.

Annotations.

"Ne quid nimis."

THE NEW PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a meeting of the Council of the Royal College of Surgeons of England held on July 12th Mr. Henry Morris was elected President and Mr. Edmund Owen and Mr. Rickman J. Godlee were appointed Vice-Presidents. To Mr. Morris, who has thus attained the highest honour which it is in the power of the corporation to which he belongs to bestow, we offer our hearty congratulations. Mr. Morris is well known as an able and energetic worker in the field of surgery in general, while he has made for himself a wide-spread reputation in that department of surgical science which deals with the genito-urinary apparatus. He has won for himself reward in the hearty recognition of the value of his work accorded by his brother practitioners, while the public has been prompt to recognise in him a friend of exceptional skill. His practical and enthusiastic interest in the cause of medical education, especially the education of the London student, was shown by his recent gift of the sum of £1000 to the endowment fund of the Middlesex Hospital Medical School. Mr. Morris's views upon medical education are worthy of the consideration of everyone who is interested in the subject, and though we ourselves have not always been able to see eye to eye with him, yet we must acknowledge his whole-hearted wish for the improvement and reform of medical education in London. It will be remembered how ably he set forth his point of view in the address delivered by him before the Medical Society of London on May 15th, 1905. A strong man, one who knows clearly what he wants and who can explain his views in simple well-turned sentences, Mr. Morris should prove an able presiding officer of the corporation which has entrusted its destinies for the present to his hands. In offering him our best wishes in his new post we also take the opportunity of congratulating Mr. Tweedy upon the successful conduct of the affairs of the College during the long period of his administration which has now come to an end. Mr. Tweedy's labours as President of the College were complicated by the fact that he was during a part of the same period President of the Ophthalmological Society, but he allowed no call, private or official, to stand between him and the energetic discharge of his duties towards the College.

SERVIA AND THE CHICAGO MEAT SCANDAL.

IN the report by our Special Sanitary Commissioner on the Chicago stockyards which was published on Jan. 7th, 1905, there occurs the following paragraph: "Several years ago when in Servia, I was consulted by the authorities as to what could be done to improve the material resources of the country. The founders of both rival dynasties, the Karageorgewitch and the Obrenovitch houses, had been engaged in the rearing of pigs. Indeed, pigs and prunes are the principal products of the country, so I urged that instead of sending at great cost living pigs to the Hungarian markets a model slaughter-house should be constructed according to the latest principles of sanitary science. Close to Belgrade, either on the banks of the Save or of the Danube, there is an abundance of vacant space admirably suited for such a purpose. Here shambles made mainly with iron and glass, bathed in daylight and sunlight, with double ventilating roofs, could be constructed. Of course, there would be good laboratories for bacteriological research and microscopical examination. With such measures and precautions the products might attract many purchasers by reason of the security which enlightened scientific and State control would insure. Is it now too late for such arguments to be applied at Chicago?" It is obvious that much trouble might have been saved if the arguments as suggested had been applied at the Chicago stockyards. According to the *Daily Mail*, the imports of tinned meats to the Albert Docks, London, from Boston and New Orleans, which consist of Chicago products, amounted in June, 1905, to 27,000 cases; but there were only 4000 cases in June, 1906. In July, 1905, 24,000 cases came over; but in July this year not a single case was landed. Not only, however, is the Chicago trade with England thus falling off but it has been stated in several papers that Servia is going to enter the lists as a competing power. According to the *Neue Freie Presse* English capitalists are expected to come to the rescue of Servia in the difficulties which arise as a consequence of the constant conflict between that small State and her powerful neighbour Austria. Whenever Servia fails to bow to the exigencies of Austrian diplomacy some form of cattle disease and swine plague is found to prevail and the Austro-Hungarian frontier is closed to the Servian hogs or cattle. The principal trade of the country is thus paralysed. Therefore it would be a great advantage for Servia to do its own slaughtering of beasts and to preserve and to pack its own meat. For these reasons it is stated that a group of English capitalists are about to visit Belgrade with the view of making arrangements so as to found a new stockyard and packing town near Belgrade. Certainly there is an opening for the creation of this industry on scientific lines, the first object being to provide food products in such a manner that so sort of suspicion as to their wholesomeness could arise. This the Servian State might have undertaken to its own profit, direct and indirect, without interfering with any vested interest, for these do not exist in that somewhat primitive country. It would be difficult in making the attempt to find a better moment—a better psychological moment, as Prince Bismarck would have said—than the present. But the Servian Government, in its eagerness to secure such assistance as may reduce

the burden of Austrian pressure on the economic situation, must be very careful not to grant concessions that only cover the financial requirements of the case. This is above all, and first of all, a public health question. Further, and unlike many other public health questions, it is a matter on which the general public feels very strongly. The Chicago scandal has served a good purpose in educating the masses on this subject, a fact proved by the complete collapse of the trade in Chicago tinned meats. Therefore, if the Servian Government does not feel capable of itself undertaking to create the meat industry so much needed in that country it must grant concessions to capitalists, from whatever country they may come, only under the cover of such stipulations as shall absolutely insure that they will adopt the most perfect and scientific health-preserving methods. Our Sanitary Commissioner made suggestions to this effect when called to Belgrade by the Servian Government so as to advise in regard to a scheme for the drainage of the capital. This was some nine years ago. The idea has taken time to ripen but there will not be much cause to regret such delay if good use is made of the extraordinarily favourable opportunity which the Chicago scandal provides for such an enterprise.

UNQUALIFIED DENTAL PRACTICE.

A CASE of some interest to the dental profession and to the public in general has recently been decided in India. A man named David Lamb, once of Liverpool, and described as a dental surgeon carrying on his "business" at Secunderabad, sued for libel a person named Dr. A. A. Mix for advertising that he was the only qualified dentist in Secunderabad, the plaintiff alleging that the statement was prejudicial to his practice and interests and claiming Rs.1000 damages. The plaintiff, so far as the evidence showed, had never attended any school or university where dentistry is taught; he had apparently spent a period of nine months with a dental practitioner and previously to this was a planter, and on the strength of this training he called himself an American dentist because he claimed that he practised the American system of dentistry, whatever that may mean. He obtained in practice the services of one named Hertz, a Doctor of Dental Surgery, to whom he paid monthly the sum of Rs.450 out of a total takings of Rs.750. On Dr. Hertz leaving the income of the practice underwent a considerable diminution. The defendant, Dr. Mix, was a Doctor of Dental Surgery of Buffalo, U.S.A., and he stated that to call oneself an American dentist the individual must possess the degree of D.D.S. In India there is nothing to prohibit the practice of dental surgery by anyone; the question therefore at issue was mainly the right amount of importance to place on the use by Dr. Mix of the word qualified and evidence was given by two medical practitioners with regard to the generally accepted meaning of the term. In giving his decision the judge held that the advertisement was not a libel and that the publication only referred to the qualifications of a dentist which admittedly the defendant possessed and the plaintiff did not possess. The judge also held that the advertisement had nothing whatever to do with the competency and capabilities of the litigants which the defendant was presumed to possess on account of his qualification and which the plaintiff also might possess in an equal, or even in a greater, degree. The case gives a good insight into the question of unqualified practice and shows the flimsy grounds on which an individual will assume the title of dentist and practise on the unsuspecting public. In India and our colonies we understand that unqualified dental practice is rampant, but unfortunately it is by no means confined to those portions of the empire, for at home the quack and the charlatan thrive despite all the efforts of those interested in trying to enforce the spirit of the Dentists Act. Cases are constantly coming into the law courts and under the notice of the proper practitioners in which not only has bodily harm been done by unqualified people but also exorbitant fees have been obtained under what is nothing more or less than obtaining money under false pretences, and yet the Government makes no effort to amend this altogether unsatisfactory condition of affairs. In the case under notice we think that Dr. Mix's ethics are open to criticism. His assumption of the title of American dentist is unfortunately only in keeping with the action of many other men educated in America who come to practise here and in our colonies. If an individual goes to practise in a foreign land he should conform to the etiquette of the profession in that land. The generally accepted position in this country is for those practising dentistry, whether medically qualified or not, to use the title of "Mr." and not "Dr." A large amount of the ill-feeling that exists towards American graduates practising in this country would cease if they would conform to the etiquette of the profession here and carry out their practice on lines more in keeping with the traditions of an honourable calling.

THE ANNUAL REPORT OF THE METROPOLITAN ASYLUMS BOARD.

THE report on the work of the Metropolitan Asylums Board during the year 1905 which has just been published is an important volume of over 300 pages and contains numerous charts and tables showing the movements of infectious disease in London. The work of the Board, as may be known to many of our readers, is very far-reaching, including jurisdiction over 17 infectious hospitals, five asylums for imbeciles, a training ship, 15 schools or homes for certain classes of children, and eight land ambulance stations, besides a service of ambulance steamboats. During the year 27,162 patients passed through the Board's fever hospitals and 72 patients through the small-pox hospitals. The number of cases of scarlet fever treated was 19,362, a larger number than in any previous year since the establishment of the Board's hospitals in 1870. The increase was due not so much to the greater prevalence of the disease as to the increased percentage of persons attacked who now enter the hospitals. In 1890 only 42 per cent. of the cases notified came into hospital. Last year over 88 per cent. were admitted. The death-rates, except in the case of small-pox, compared well with the death-rates of the previous year, those for 1905 being: scarlet fever, 3·3 per cent.; diphtheria, 8·3 per cent.; enteric fever, 13·1 per cent.; other diseases, 6·8 per cent.; and small-pox, 14·5 per cent. Those for 1904 were 3·4, 10·1, 14·6, 9·2, and 6·0 per cent. respectively. The decline in the rate of mortality amongst cases of diphtheria is an extremely important feature in the statistics. In 1893, the year before the disease was treated with antitoxic serum, the death-rate was as high as 30·4 per cent. Since the introduction of the treatment the rate has rapidly declined. At one of the hospitals a record has been kept of the mortality-rates according to the day of disease on which the antitoxic serum treatment was commenced. Of 219 cases treated during the years 1897 to 1905 on the first day of the disease not a single case died, and amongst 1364 treated on the second day of the disease the mortality-rate did not rise above 5·4 per cent., whereas amongst cases not coming under treatment until the fifth day and after the rate has been upwards of 22 per cent. Not for the first time attention is drawn to the apathy displayed by the metropolitan boards of guardians in making use of the homes provided for

poor children requiring the benefit of seaside air and for children suffering from pulmonary tuberculosis in its early stages. The Board complains that the guardians also fail to take full advantage of the excellent training which is given to boys on the training-ship *Exmouth*. The guardians of some of the country unions are not so lax in their attention to the best interests of boys under their care and the number of boys from these unions at the *Exmouth* is yearly increasing. It is hoped that as the good work of these institutions becomes better known they will be more appreciated.

TREATMENT OF EPILEPTIFORM NEURALGIA WITH THE X RAYS.

AT a meeting of the Société Médicale des Hôpitaux of Paris on May 4th M. A. Béclère and M. Haret showed a man the subject of left facial paralysis whose face on that side was disfigured with cicatrices. For seven years he had suffered from epileptiform neuralgia and had undergone a number of operations. First, all the teeth on the left side of the upper jaw were extracted in succession. Then the infra-orbital nerve was divided. No relief was afforded. Excision of the Gasserian ganglion was performed and the facial paralysis was a result. The pains disappeared but returned after six or seven months. Then the superior cervical ganglion of the sympathetic nerve was excised. The pains again disappeared but returned after a shorter interval—four or five months. Severe attacks of epileptiform neuralgia occurred from ten to 12 times daily. The pains were felt in the alveolar border of the left superior maxillary bone from which the teeth had been extracted. The x rays were applied through the mouth solely to the painful region, the neighbouring parts being protected by a tube of lead glass (*verre au plomb*). The rays fell on the alveolar border in the position of the first and second molar teeth. They were applied at intervals of a week. After the first and second sittings there was no improvement but after the third the pain diminished and a slight reaction was observed on the border of the upper lip, which had been badly protected. After the fourth sitting, which took place on April 25th, 1905, the pains disappeared and they have not since returned. M. Béclère and M. Haret did not claim to have cured the patient by this treatment but to have produced an interval of immunity of more than a year, a much better result than that given by the severe operations. If the pains recurred the treatment could be repeated. They did not assert that all cases of facial neuralgia would give such a good result but they thought that before exposing a patient to the dangers of such an operation as excision of the Gasserian ganglion this simple method of treatment should be tried.

NURSES AND THE PUBLIC VIEW OF THEIR WORK.

THERE can be little doubt that the popular views on nursing are liable to be erroneous and must be the cause of no little annoyance to those who follow that calling. On the one hand, there are some who refer to the nurse in terms of fulsome adulation as combining the qualities of the heroine with the devotion and self-sacrifice of the saint and in every way exaggerate the importance of her place in the scheme of treatment, forgetting that the duties of the true nurse are to minister to the comfort of her patient and religiously to carry out the instructions of the practitioner who is in charge of the case. On the other hand, the nurse is too often treated both unkindly and neglectfully by those who, forgetting the arduous and exacting character of her duties, make unreasonable demands upon her time and energies and deny to her that consideration in regard to her own personal health and comfort to which she is justly entitled. Thus, the nurse is not infrequently in private houses expected to be on duty or within call both night and day, to snatch her meals when she can, and to forego some of the necessary rest and exercise without which she cannot hope to remain in health. That conditions perilously near to sweating are not unknown to the nursing staffs of institutions would appear to be the case if the account given of the proceedings of the Aston board of guardians, reported in the issue of the *Birmingham Despatch* of June 27th under the heading of "over-worked nurses," is to be believed. The infirmary committee in the course of a report to the board called attention to the fact that the infirmary was understaffed, pointing out that a probationer nurse was often in charge of more than one ward—that is, of more than 50 patients. A member of the committee, in moving the adoption of the report, pointed out the severe strain upon the night staff of the hospital and stated that the night nurses ofter had to go without their meals owing to the pressure of their duties. It was proposed that six additional nurses should be appointed so as to have one on night duty for each ward, which would appear to be a reasonable demand, indeed the least compatible with safety. Eventually, after some discussion, it was decided to appoint three additional nurses instead of six. A member of the board who was subsequently interviewed expressed his disappointment that the guardians failed to realise the high pressure at which the nurses worked and also his fear that the incomplete night nursing would be responsible for occurrences which the guardians would deplore, owing to the number of acute cases and of mental cases which required constant attention. It is manifestly unjust, alike to the patients and to the nurses themselves, that too great a number of beds should be assigned to the care of each nurse, so as to render it impossible to carry out effectively the requisite nursing of each patient. The incident illustrates the lack of knowledge of the duties and hours of work of nurses which so generally obtains. It is certainly the duty of those in authority at public institutions and of the heads of private nursing associations to see not only that the nurses carry out their duties satisfactorily but also that they are not over-worked and that they obtain an adequate amount of rest and of outdoor exercise. The altruistic aspects of the profession of medicine and of nursing are likely to invest them with a sentimentality in the minds of certain people who forget that, after all, their exponents are in the majority of cases following them as a means of livelihood and endeavouring to do their duty to the best of their ability and that they deserve a sufficient recompense for their labours and some consideration at the hands of those for whom they often give most unsparingly of their time and ability, not merely from an exalted idea of the nobility of their calling but from a sincere and honest desire to carry out efficiently the duties intrusted to them.

INTEMPERANCE IN THE EIGHTEENTH CENTURY.

A PIONEER of temperance reform, writing in 1734, makes the now familiar complaint as to the recklessness of drinkers and the deadly effects of over-indulgence in liquor. "Though they yearly see a thousand fall at their side," says he, "and ten thousand at their right hand, yet will they not be warned. There is that predominant bewitching of naughtiness in these fiery liquors, as strongly and impetuously carries men on to their certain destruction." The old writer at first sight uses a familiar set of phrases and indulges in what looks like the time honoured exaggerations of the modern anti-alcohol crusade. Yet a closer acquaintance with his "Friendly Admonition to the Drinkers of Brandy"

suggests certain interesting inquiries. We are led to ask, for instance, what was the principal cause of death in the eighteenth century, the age when Englishmen drank more deeply than at any time before or since? Surely in that age, if in no other, a large proportion of the male population "died of drink," and cirrhosis of the liver must have been very common. It is noticeable that biography throws very little light on these subjects. We read of famous men of letters who indulged in great drinking bouts and suffered, as did Dr. Johnson, from dropsical complaints. We read much of the tortures caused by calculi and gout and of deaths from dropsy. But we hear nothing of death attributable to drink as such. Again, the bills of mortality leave us much in the dark. In the oldest bills of the time of Charles II. we find dropsy figuring next to consumption as a cause of death, the latter invariably heading the quaint list of diseases from which our ancestors died. Now this dropsy, which had carried off on an average from 20 to 30 out of every 400 of the population buried, may have been chiefly of hepatic origin. We are inclined to think that it was. The record of necropsies before the nineteenth century is most unsatisfactory. Laennec was one of the first to give an account of liver diseases, but before his time the appearance of the liver after death is a matter of the most fantastic and perfunctory description.

APPENDICECTOMY AN HOUR AFTER PARTURITION.

OPERATION for appendicitis has now been frequently performed during pregnancy but we do not know of any case like the following in which it was done just after labour. In the *Intercolonial Medical Journal of Australasia* for May Mr. J. W. Dunbar Hooper has reported the case of a woman, aged 32 years, who was expecting her fourth confinement on Feb. 16th, 1906. On Feb. 6th he saw her at 9.30 A.M. She was quite well but as she was anxious he performed abdominal palpation and ascertained that the child was in the left occipito-anterior position. He examined both iliac fossæ without finding any pain. The patient took a dose of castor oil which acted satisfactorily but was followed twice by vomiting. At 3 P.M. she was in considerable pain and was certain that labour had begun but the nurse was equally convinced that the pain was unlike that of labour. At 4 P.M. Mr. Hooper saw the patient and was struck by her altered appearance. She was lying on the left side with the right knee drawn up, the face pale grey, and the expression anxious. The pulse was 120 and the temperature was 99° F. There were slight headache and distinct nausea. The patient was afraid to move because the slightest movement of the right leg produced great pain in the lower abdomen. McBurney's point was very tender. There were no signs of labour, even on vaginal examination. Acute appendicitis was diagnosed. A consultation with two other practitioners was held and it was decided to operate without waiting for the onset of labour or of suppuration. However, she was left in charge of the nurse for the night with orders to report immediately any change. On the following morning the tenderness at McBurney's point persisted and some swelling was found there. She was removed to hospital for operation but on the way labour began. She arrived at 11.30 A.M. From 1 until 3.30 P.M., when the child was born, she was kept under chloroform. At 4 P.M. Mr. Hooper slowly expressed the placenta. A distinct but not very tender mass could be felt in the position of the appendix. At 4.15 laparotomy was performed. The appendix was found adherent to the omentum and was removed. It was very large and of a greenish-grey colour. It would have ruptured if not gently handled. The patient rallied well and except for a mild attack of phlebitis recovery was uninterrupted. Dr. J. F. Mackeddie, pathologist to the Alfred Hospital, Melbourne, reported that the appendix was twisted, enormously swollen, dusky, and lustreless. In parts its wall was thickened almost to obliteration of the lumen; in other parts the dilated canal was on the point of rupture through the wall thinned almost like tissue paper. Microscopically the contents were grumous débris containing pus organisms and colon-like bacilli. Sections of the thickened wall showed chronic inflammatory changes on which acute had supervened.

A USEFUL PUBLICATION BY THE BOARD OF AGRICULTURE AND FISHERIES.[1]

THE Board of Agriculture and Fisheries has undertaken the publication of a geological survey of the soils and subsoils of London from a sanitary point of view, and we congratulate the originator upon a useful idea. The memoir deals exhaustively with the soils and the subsoils of London and its environs with reference to sites for houses. Questions of water-supply, of ground-water, and of drainage are also dealt with in their sanitary aspects. The geology of the district is described according to the nature of the subsoil, whether clayey, sandy, gravelly, or chalky. A small colour-printed map accompanies the letter-press and the memoir is further illustrated by 22 sections and drawings. The memoir is a re-issue of a small work written by Mr. Horace B. Woodward, F.R.S., additions having been made to the text, especially in the chapters dealing with water-supply and drainage; and copies may be obtained from any agents for the sale of ordnance survey maps, or directly, or through any bookseller, from the Ordnance Survey Office, Southampton, price 1*s.* 6*d.* We are constantly asked where trustworthy advice can be obtained upon the points dealt with in this small book. The public is now very much alive to the advantages of residing in a house upon a suitable foundation and medical men are more than occasionally invited to give their opinion as to the district in which a house should be hired or bought, where the head of the family must remain in London for reasons of business, and where his particular diathesis forbids him to do so save in the most favourable environment. Mr. Woodward's manual supplies suggestions for authoritative answers to all questions of this sort.

FOURTEENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

THE Fourteenth International Congress of Hygiene and Demography will take place from Sept. 23rd to 29th, 1907, in Berlin. The committee of organisation under the presidency of Mr. Bumm, President of the Imperial Board of Health, has forwarded the preparatory work of the Congress to such a degree that the invitations will be shortly issued. The work of the Congress, which will probably take place in the locality of the Reichstag, is divided into the following sections:—Section 1: Hygienic Microbiology and Parasitology. Section 2: Dietetic Hygiene, Hygienic Physiology. Section 3: Hygiene of Childhood and Schools. Section 4: Professional Hygiene and Care of the Working Classes. Section 5: Combating Infectious Diseases and Care of the Sick. Section 6A: Hygiene of Dwellings and Townships. Section 6B: Hygiene of Traffic. Section 7: Military, Colonial, and Naval Hygiene. Section 8: Demography. The direction of a scientific exposition associated with the Congress has been undertaken by Professor Geheimer Medizinalrat Dr.

[1] Memoirs of the Geological Survey, England and Wales: Soils and Subsoils from a Sanitary Point of View; with especial reference to London and its neighbourhood. By Horace B. Woodward, F.R.S. London: Printed for His Majesty's Stationery Office by Wyman and Sons, Limited, Fetter-lane, E.C. And to be purchased, either directly or through any bookseller, from Edward Stanford, 12, 13, and 14, Long Acre, London, or John Menzies and Co., Rose-street, Edinburgh, or Hodges, Figgis, and Co., Limited, 104, Grafton-street, Dublin. 1906. Price 1*s.* 6*d.*

Rubner, Berlin N. 4, Hessischestr. 4. The business of the Congress is conducted by the secretary-general, Retired Surgeon-Major Dr. Nietner. The offices are at Berlin W. 9, Eichhornstr. 9.

ANGINA PECTORIS AS AN EARLY SYMPTOM OF ANEURYSM OF THE AORTA.

IN the *Medical Chronicle* for May Professor W. Osler has called attention to cases of aneurysm of the aorta in which angina pectoris is an early symptom. He points out that in aortic aneurysm four kinds of pain may be recognised —pain with the characters of true angina, neuralgic pain (due to pressure on nerves), pain of a dull boring character (which occurs when the chest wall is being eroded), and pain referred to the nerves of the arms or to the præcordial, pectoral, or sterno-mastoid regions. In only a small minority of cases is the pain of a definitely anginal type. Such pain may precede for months or years the appearance of an aneurysm which in the meantime is unsuspected. Professor Osler relates four cases of which the following is an example. A muscular man, aged 51 years, came under observation on March 11th, 1894. He had always enjoyed good health and said that he had never had syphilis. Since October, 1893, he had had attacks of pain in the chest which began a short time after he had gone to bed. The pain was of a dull burning character and situated just beneath the sternum. After a short time it usually passed off and he went to sleep. Then about 4 or 5 A.M. he was awakened with pain and a sense of oppression and he had to sit up in bed. Frequently there was an unpleasant sensation in the back; sometimes the pain left the front and became severe in the back. There was no special anguish or sense of impending death. He could move about during the attacks and motion gave relief. Nitrite of amyl, nitro-glycerine, and the iodides were taken without avail and lately he had been forced to use morphine. On examination he was found to be a healthy-looking man. The pupils and radial pulses were equal. Percussion over the manubrium was clear. The second cardiac sound was accentuated towards the base and was loud and ringing to the right of the sternum. There was no tracheal tugging. The knee-jerks were absent. It was difficult to determine whether there was true angina associated with an organic lesion. The attacks had scarcely the intensity of the genuine form. There was no sweating, change of colour, or immobility. Only two facts suggested an organic basis—accentuation of the second sound and absence of the knee-jerks. Six years later the patient was again seen. The attacks had gradually disappeared, though he had at intervals pains in the chest. There were stridor, diffuse pulsation over the manubrium, diastolic shock, and tracheal tugging.

TRANSPLANTATION OF THYROID GRAFTS INTO THE SKIN.

IT is well known that in myxœdematous conditions ingestion of thyroid material obtained from an animal and administered under any form will to some extent restore the normal condition but the treatment is only palliative and there is a possibility of a kind of tolerance of it being established so that the therapeutic effect is lost. Many attempts have therefore been made to transplant or graft portions of thyroid gland under the skin, but all such endeavours have failed until lately.[1] Professor Charrin of the College of France and M. Christiani have, however, at last solved the problem by improving the operative methods and employing a great many very small portions of thyroid glands taken from animals of the same species and transplanted with the utmost celerity. At a recent meeting of the Paris Academy of Sciences held on July 2nd they showed a young woman who in consequence of having no thyroid gland and showing symptoms of myxœdema had been treated with 34 drops of a thyroid solution every day. After having received 38 thyroid grafts in two operations she was able two years afterwards greatly to reduce the dose of the solution so that she now took only from two to four drops—i.e., 0·10 part by weight instead of 1·50. She has, moreover, become the mother of a normal infant and during her pregnancy the thyroid grafts became enlarged, just as happens with the thyroid gland in pregnancy under normal conditions. The thyroid grafts have preserved their glandular nature. This case seems to point the way to a new method of treatment.

[1] THE LANCET, May 26th, 1906, p. 1492.

THE LAY TREATMENT OF DISEASE BY MUNICIPALITIES.

A RESOLUTION was adopted by the Bradford division of the British Medical Association on June 12th which is of distinct interest to the medical profession. It runs as follows:—"That in the opinion of this meeting it is highly undesirable that the city council should carry on the treatment of disease for profit through officials at the corporation baths who are not legally qualified medical practitioners, who treat diseases which are not of an epidemic character; that such practice is illegal, the council having no powers authorising them to carry out such treatment." A copy of this resolution has been forwarded to the mayor of the town, to the medical press, and to the General Medical Council, and we are certain that all interested will see the importance of the opinions expressed. Municipalities are only properly prudent and farseeing when they strive to afford facilities for the systematic treatment of disease, but any attempt to substitute lay methods for scientific therapeutics must end in disaster.

THE DISPARITY BETWEEN THE THERAPEUTIC ACTIVITY OF FRESH DRUGS AND OF THEIR PREPARATIONS.

IT has often been pointed out that galenical preparations and active principles are not identical in their therapeutic action with the corresponding fresh drugs. In the April number of the *Répertoire de Pharmacie* M. Perrot instances opium, cinchona, coca, kola nut, digitalis, strophanthus, and the mydriatic group of solanaceous plants as examples of drugs which are not wholly represented by their active principles, morphine, quinine, cocaine, caffeine, digitalin, strophanthin, and atropine. But such active principles are usually of definite composition and their dose is readily ascertained, whereas tinctures, extracts, and other galenical preparations of plants vary considerably in strength and in medicinal action, owing to variations in the crude drugs and in the mode of preparation, and other causes. Some years ago M. Golaz, a Swiss pharmacist, attempted to produce galenical preparations of uniform strength and wholly representative of the crude drug by subjecting the fresh juice of plants to dialysis, but his method does not appear to have been adopted largely. The recent researches of M. Bourquelot and M. Bertrand on the ferments or oxydases present in plants have pointed to a probable way of improving the methods of making galenical preparations. They have shown that the oxydases, when exposed to a high temperature, lose their power of producing changes in the active principles of plants. For example, kola exerts an energetic action in cases of fatigue on the natives of those parts of Africa where it is indigenous, whereas preparations of kola made in Europe from the dried nuts are much less active. M. Perrot found that the fresh nuts and the extract obtained therefrom contain a phenolic compound, kolatine, which exerts an action entirely different from that of caffeine, to which the medicinal properties of kola in fatigue have hitherto been ascribed. M. Bourquelot prepared an extract from fresh kola nuts which had been plunged into boiling alcohol to destroy the oxydase. This extract differed

from the ordinary extract of kola in containing only traces of free caffeine, though from 8 to 9 per cent. of caffeine was present in the form of a complex chemical compound, probably the glucoside kolanin. The extract possessed medicinal properties equal in intensity to those of fresh nuts and afforded an excellent illustration of the value of employing drugs in the fresh state when possible and of preventing those changes which are induced by the presence of oxydases. M. Perrot suggests that further investigations on the same lines may lead to the discovery of better methods for the manufacture of galenical preparations which shall be wholly representative of the drugs from which they are made.

THE MEDICAL INSPECTION OF CHILDREN ATTENDING ELEMENTARY SCHOOLS.

ON July 16th Mr. A. Birrell, President of the Board of Education, received a deputation from the British Medical Association and from the Manchester and Salford Sanitary Association. Mr. Tennant, M.P., who introduced the deputation, said that the members thereof were anxious that the clauses in the Education Bill now under discussion concerning medical inspection should be made compulsory instead of voluntary. Sir Victor Horsley and Sir William H. Broadbent both spoke in support of the aims of the deputation. Mr. Birrell adopted the stereotyped form of reply upon such occasions. He had every sympathy with the desires of the deputation but he could not see his way to grant their requests. There was the spectre of the rates and he had received a deputation from ratepayers who did not share the views of the deputation which he was then receiving. All the same, every pressure would be put by the Board of Education upon local authorities to make such arrangements as they could. We have upon various occasions, notably in our issue of Feb. 24th, p. 536, and in that of April 21st, p. 1123, given the opinion that medical inspection is most desirable. As we said in the article referred to in our issue of Feb. 24th, the State compels parents to send their children to school, or at least to have them educated, and this being so it is surely the duty of the State to find some way in which children attending school shall be prevented from being failures on account of their own ill-health or physical deficiencies or a source of danger to their fellows. In the course of the debate on the Bill during the same day in the House of Commons Mr. Tennant moved an amendment to one of the clauses to secure compulsory medical inspection of the children. Mr. Birrell said that he was in the hands of the House. He was willing to put down for the report stage an amendment to the following effect: "It shall be the duty of every local authority to provide for the medical inspection of every child on its application for admission to a public elementary school and on such other occasion as the Board of Education may direct or the local education authority may think fit." The matter will therefore be further discussed during the report stage of the Bill and we hope that in addition the question of the payment of the inspecting medical men will come up. Governments have a way of ordering people to send for medical men, without making any provision for the payment of the medical man sought for. An example in point is the Midwives Registration Act.

MICROCEPHALICS AT THE HIPPODROME.

FROM time to time the enterprising management of the Hippodrome includes in its programme items which have an interest not only for the morbidly curious but also for the genuine anthropologist. Last year it secured a group of pygmies from Central Africa—a race never before seen in England; they became an attraction for "society" and the subject of an elaborate memoir (not yet published) by a committee of the Anthropological Institute of Great Britain and Ireland. Some months ago a Russian gentleman took his place in the programme; he was over eight feet in height; he was huge in every respect excepting the cranial or brain-containing part of his skull which was of very ordinary proportions. His face was massive and very placid; his voice was sepulchral, but he was so obstinate and suspicious in nature that he absolutely refused to be examined or measured. At the present time three very remarkable individuals are being shown. They are supposed to be representatives of a native race of America (Mexico?) which is now almost extinct. No history can be obtained beyond the fact that the German gentleman who now guides their destinies discovered them in Germany whither they had been brought from America by a citizen of the United States. They provide, therefore, a very interesting problem for an enterprising physical anthropologist. The cranial parts of their heads are uncommonly small; the determination of the exact size of their brains is a matter for Professor Karl Pearson, but from measurements made of their heads their brain weights may be estimated to range between 500 and 600 grammes, considerably less than half that of the average individual. Their heads have the typical microcephalic form. Their skins are rather deeply pigmented—a brown tint, but the pigment is peculiarly superficial in deposit and apparently not permanent. The sex in each case is probably female but the breasts are not developed; the palates are narrow and vaulted; the state of their dentitions shows them to be under 20 years of age. The colour of the iris scarcely matches the complexion of the skin and indicates a very close relationship with one of the lighter-haired European races. The hair is tied in a bush-like mass on the crown of the head, thus emphasising the peculiar smallness of the skull; the coiffure is one which we do not remember to have seen before in a native race. Their manners are polite and easy; they shake hands in the approved European fashion; in fact, it must be concluded that their native manners have been entirely replaced during their short stay in Germany. They speak no language and the only words which they seem to understand belong to the German form of speech. As will be seen from the brief account just given, these "representatives of an almost extinct native race" are of interest not only to students of anthropology but also to those of human nature.

PRESERVATIVES IN MILK.

WE are glad to see that the Local Government Board is drawing the attention of the authorities who are responsible for the administration of the Sale of Food and Drugs Acts to the fact that the use of preservatives in milk is not a *sine qud non* to the trade. The Board, in a circular recently issued, states that in certain boroughs in London and elsewhere in which samples of milk are systematically tested for preservatives, the presence of substances at any time of the year has been found to be exceptional and there is evidence to show that a very large number of milk vendors conduct their business without the use of antiseptics, even in those instances in which the milk comes long distances by rail. Proceedings instituted against vendors of milk containing preservatives have usually been taken under Section 6 of the Sale of Food and Drugs Act. Conviction has followed, it being held that when the purchaser who asks for milk is supplied with milk plus a preservative he does not receive an article of the nature, substance, and quality demanded and is prejudiced thereby. The Board suggests that analysts should record in their quarterly reports the number of samples of milk which have been examined with the view of ascertaining the presence of preservatives and should report at once to the council concerned the facts as to samples which proved on analysis to contain an added preservative. It is further suggested that proceedings should be taken in all cases where such a

preservative is found. Also it is suggested that when the presence of a preservative is declared the condition of such preserved milk should be carefully examined. As regards formalin and boron preservatives the Board is advised that the presence in milk of formalin to an amount which is ascertained by examination within three days of collecting the sample to exceed 1 part in 40,000 raises a strong presumption that the article has been rendered injurious to health and that the purchaser has been prejudiced in the sense conveyed in Section 6 of the Sale of Food and Drugs Act. A similar presumption is raised where boron preservatives are found in milk to an amount exceeding 57 parts of boric acid per 100,000 parts of milk. The despatch of this circular to the authorities administering the Sale of Food and Drugs Act looks as though the Local Government Board at last means to codify the recommendations of the Departmental Committee on Preservatives and Colouring Matter in Food which reported so long ago as 1901. We have long urged for an official recognition of the findings of this committee.

DE SENECTUTE IN PUBLIC OFFICES.

A LIVELY and interesting discussion in the board room of the Islington guardians is reported on the subject of the retirement of officers of the board on or after the attainment of the age of 65 years. The particular case which gave rise to the discussion was that of Dr. James Greenwood who, according to the report of the finance committee, must be 73 years old at least. The committee, especially having regard to a probable rearrangement of districts, thinks that the time is fit for Dr. Greenwood's retirement and recommended the board to pass a resolution to this effect and to forward it to the Local Government Board. There is, of course, much to be said for retirement from public offices on the score of age. But the finance committee found itself in a minority of two on the proposal and even these two found themselves hoist with their own petard. Notice was given by Mr. Malins, one of the majority, that at the next meeting he would propose that the two guardians who constituted the minority should be called on to resign on account of their age. Mr. Lambert, one of these guardians, is well known as a most competent and active member of the board, of the Metropolitan Asylums Board, and of the borough council. We sincerely hope that his public usefulness will not be cut short by any such action. We express no opinion on the merits of the argument beyond saying that the case for the medical officer was well put, especially by the vigorous chairman of the board, Mr. G. S. Elliott, who shrewdly said that many men of 70 were better men than others at 40; that there had not been a single complaint against Dr. Greenwood; and that he was much respected by the poor in his district. It would seem that Dr. Greenwood is one of those exceptional men who belie their age and that he still displays an agility and activity which have always characterised him in his long Poor-law service of over 50 years. Such qualities are always interesting and may justify recognition in an age which is trying to extend the health and the life of the race.

THE ACCIDENT TO THE PLYMOUTH BOAT EXPRESS.

THE inquest on the bodies of those persons who lost their lives in the accident to the Plymouth boat express on July 1st was concluded at Salisbury by the city coroner, Mr. Buchanan Smith, on July 16th. Evidence was given that the train which according to the London and South-Western Railway Company's regulations should have travelled round the curve near Salisbury station at a speed not exceeding 30 miles an hour actually did so at a speed of from 60 to 70 miles per hour. The jury returned a verdict to the effect that the deceased lost their lives owing to the derailment of the train, that the derailment was caused by the excessive speed at which the train was travelling, and that this was contrary to the company's regulations. They added a rider to the effect that every driver of a train not stopping at Salisbury ought to have his attention specially called before starting to the regulations affecting his journey and that this was not done in this case. The coroner said that the recommendation of the jury would be forwarded to the Board of Trade. Quickness of intercommunication is no doubt a desirable thing but it can be purchased at too high a cost. British railways are, it must be admitted, singularly free from accidents to trains but in many instances it is the public who are primarily to blame for delays and the possibilities of accident. In many of the companies serving the suburbs the amount of traffic has increased to a much greater extent than the roadways are really able to bear. Hence an increased number of trains, most of which are unpunctual, and unpunctuality always means the possibility of accident. Yet the public demand frequent trains and grumble if these are not provided. We may add that it is the same desire for rapidity of intercommunication which has made London streets an experimental ground for machines which are absolutely unfitted for the purposes to which they are daily applied.

THE Department of Public Health of Queensland in a bulletin dated June 9th reports that the last case of plague which occurred in Queensland was notified on May 16th of the current year. As regards the Cape Colony the medical officer of health of the colony reports that for the week ending June 23rd no case of plague in man or other animal occurred except at East London, where 2 plague-infected mice were found. As regards the Mauritius, a telegram from the Acting Governor received at the Colonial Office on July 14th states that for the week ending July 13th there were 1 case of plague and 1 death from the disease. As regards Hong-Kong, a telegram from the Governor received at the Colonial Office on July 16th states that for the week ending July 14th there were 14 cases of plague and 17 deaths from the disease.

THE King has given to the undermentioned gentlemen His Majesty's Royal licence and authority to accept and wear the insignia of the Order of El Aliyeh which has been conferred upon them by His Highness the Sultan of Zanzibar in recognition of valuable services rendered by them to His Highness, viz.:—Mr. Alfred Henry Spurrier, L.R.C.P. Lond. (second class); Mr. George Allardice MacDonald, M.B., C.M. Edin., and Mr. Archibald Donald MacKinnon, C.M.G., M.D. Aberd. (third class); and Mr. Henry Deedes Nutt Mackenzie, M.D. Edin. (fourth class).

A CONVERSAZIONE and dance will be given by the Irish Medical Schools' and Graduates' Association at the Hotel Great Central on Thursday, July 26th, at 9 P.M., to meet the council and representatives of the British Medical Association. Members of the Irish Medical Schools' and Graduates' Association can obtain tickets from Mr. E. Canny Ryall, 85, Harley-street, W.

AT a recent general meeting of the members of the Incorporated Institute of Hygiene Sir William H. Broadbent, Bart., was elected President and Sir William H. Bennett, Surgeon-General J. Cleghorn, Sir Alfred Cooper, Mr. A. W. Mayo Robson, and Professor G. Sims Woodhead were elected as Vice-Presidents of the Institute.

THE council and headmaster of Epsom College are issuing invitations for the annual prize distribution to be held on Founder's Day, July 28th, between 2.30 and 7.30. There will be choral evensong at 2.45 in the college chapel and the distribution of prizes will take place at 3.30 in the big schoolroom.

THE ROYAL SANITARY INSTITUTE.

THE twenty-third Congress of the Royal Sanitary Institute was held at Bristol from July 9th to 14th. The inaugural address was delivered by the President, Sir EDWARD FRY.

SECTION OF SANITARY SCIENCE AND PREVENTIVE MEDICINE.

The President of this section, Sir WILLIAM J. COLLINS, being unavoidably absent, the address was read for him by Dr. R. SHINGLETON SMITH. The gist of the address will be found in THE LANCET of July 14th, p. 106.

The Spread of Diphtheria.

Dr. F. T. BOND (Gloucestershire) read a paper on the Spread of Diphtheria, especially in rural districts, and the difficulties that the medical officer of health encountered in his efforts to suppress the outbreaks. Dismissing as absolutely imaginary the notion of any connexion between "drains and diphtheria," he traced the story of rural epidemics from the alighting of some bacillus in the requisite stage of specificity on the mucous membrane of the congested tonsils or fauces of some child in perhaps an elevated and sanitary locality and the spread of the infection from child to child in the school until the outbreak assumed the proportions of an epidemic, according to the number of scholars and overcrowding of the school. What, he asked, should then be done? Closure was a clumsy and ineffective procedure and should rarely be resorted to. He told how in two adjoining villages with a combined school population of 470, after a long succession of notifications extending over several months, he obtained swabs from the throats and noses of all, with the result that more or less characteristic bacilli were found in the throat only in 16 cases, in the nose in 149, and in both in 230, while only 83 gave negative results. The preponderance of nasal infection was thus well seen. His subsequent procedure, to some extent experimental, was to have the noses and throats of all the children sprayed twice daily with a 10 per cent. solution of carbolic acid, with the result that in the next six months there were only five cases, three of them being in one house. But what was notifiable diphtheria? This was easy to answer 40 years ago, but they knew now that they might have well-marked membrane without diphtheria and diphtheria with no membrane. Only by bacterioscopy could the question of diagnosis be decided and it was doubtful whether, and from whom, the medical officer of health could look for remuneration. If he could pronounce the child to be suffering from diphtheria, as he might in even slight cases showing abundant growths of Klebs-Löffler bacilli, the sanitary authority—i.e., the ratepayers—could be called on; but the wider questions, the inspection of an entire school and subsequent preventive sprayings ought to be defrayed by the Board of Education. Then as regards antitoxins. Legally they could supply them gratuitously only to patients in the hospital, and to no other persons save by a pious fiction, charging it to the expenses of the hospital. A board of guardians might supply it to paupers, indoor or outdoor, and to them only. But an urban council without a hospital could not supply antitoxin at all.

Dr. J. FLETCHER, representing the Metropolitan Asylums Board, as Dr. Bond did a county mainly agricultural, repudiated, too, any connexion of diphtheria with sewer gases or insanitary conditions. In his paper he confined his attention to the form known as post-scarlatinal, of which in the years 1896-1901 inclusive the Board had had in its hospitals an attack-rate of 4·4 per cent. among 81,245 scarlet fever patients, though owing to the extending use of antitoxin the fatality-rate had sunk from 43·3 per cent. in 1892 to 2·5. By far the greater proportion of these cases arose from infection from persons who, though without any clinical symptoms, harboured the bacilli in their throats or noses, "carriers" as they were called. Members of the staff might act thus, indeed he knew one case of a nurse suffering from mild pharyngeal diphtheria infecting 16 scarlatinal convalescents, six of whom died. He gave very fully details of a series of cases of post-scarlatinal diphtheria at Ham Green Hospital whence he concluded that the bacilli, however introduced, lurked in the mucous membrane of the nares and fauces of scarlatinal patients in a dormant state, springing into activity when, as was often the case between the fourth and sixth week of convalescence, a rhinorrhœa set in and swabs taken then from the nose would give almost pure cultures of Löffler's bacillus. On one occasion several patients had been admitted suffering from a certain amount of nasal catarrh but no notice was taken of the fact until the slow progress which they were making led to an examination of their nasal mucus, when out of 29 eleven showed Löffler's and six Hoffmann's bacilli, 12 being negative. These last were removed to the convalescent wards where one after another developed clinical symptoms of diphtheria and communicated it to others previously admitted until prophylactic doses of 2000 units of antitoxin promptly arrested the further progress of the disease.

Dr. SYMES (Bristol), after ten years' experience of bacterial examination, attached little value to it. On one occasion 50 per cent. of the children attending a skin hospital showed diphtheria bacilli in their noses or throats and he would point out that they could never sterilise throats. In one place all cases of bacterial diphtheria were sent to hospital where nearly every one developed clinical diphtheria. It was well worth consideration that post-scarlatinal diphtheria was practically confined to hospitals and was almost unknown in private practice.

There followed a short passage of arms between Dr. SYMES and Mr. HERBERT JONES, who thought that it was superfluous to look for bacteria in the presence of clinical symptoms, while Dr. SYMES believing that the bacteria without symptoms were harmless now employed examination in clinical cases only with a view to verify their specific character.

Sir CHARLES A. CAMERON (Dublin) held that sore-throats were certainly connected with bad drains and might predispose to diphtheria. In Dublin with improved sewerage sore-throats had become much less prevalent, but the diminution of diphtheria was less marked in consequence of the overcrowding of the population, 37 per cent. of whom lived in single rooms, though fairly large ones.

Dr. E. M. SMITH (York) raised an earnest protest against the growing belief in the harmlessness of sewer air and bad drains, against which there was a mass of evidence that could not be lightly ignored.

Prevention of the Growth of Algæ in Open Reservoirs.

Dr. S. RIDEAL, F.I.C. (London), read a paper on the Employment of Copper Sulphate and of Chlorine Evolved in the Electrolysis of Common Salt Solutions. The earliest experiments with the copper salt were made in America by Dr. G. T. Moore of the United States Agricultural Department, who found that the various orders of algæ were destroyed by copper sulphate in dilutions of from 1 in 8,000,000 parts to 1 in 1,000,000, but up to last year its employment had not been sanctioned by the Board of Health of Massachusetts. Mr. Reid, engineer to the Gloucester waterworks, had used it in the proportion of 1 in 3,000,000 with most satisfactory results, a single application in early spring inhibiting the growth of the chara for the remainder of the season. For 24 hours after the addition of the sulphate the water gave off bubbles of a strongly fishy odour but was then bright and clear and after another 24 hours not a trace of copper was discoverable by the cyanide test, the metal having combined with the organic sediment, and the filters required far less cleaning than previously. The only objection was the popular prejudice against the employment of copper in any form in connexion with articles of food or drink and though in this case the danger was imaginary it provided an argument in favour of the substitution of the alternative of nascent chlorine. Chlorine evolved by the electrolysis of sea water or of solutions of common salt had proved very successful in the purification of sewage effluents and Dr. Rideal believed that it would be found equally applicable to potable waters. It was true that a special electrolytic plant was required but the Digby hypochlorite apparatus could be installed at a cost not exceeding £100 and the requisite power was available wherever pumping operations were carried on, while the material, common salt, was considerably cheaper than copper sulphate at £28 per ton, though this at 1 part per 1,000,000 worked out at no more than 2*s.* 6*d.* for each 1,000,000 gallons of water treated. Chlorine was most effective with algæ of the convervoid type; dermids and diatoms were more resistant and entomostraca were not killed even by the largest quantities required by the algæ or permissible in potable waters. The "available chlorine" consumed by these rarely exceeded 0·5 part per 1,000,000, and by lake waters 1 or 1·2, but these quantities

disappeared in five hours, and even 11·2 in a lake water, far in excess of its requirements, had been resolved into chlorides and oxygen after a few days; in fact, the rapidity with which the hypochlorites broke up somewhat militated against their action. The resultant effect on London water after treatment with 0·44 part per 1,000,000 of "available chlorine" was a reduction of the oxygen consumed and an increase of the chlorides from 2·1 to 2·4 per 100,000.

International Notification of Infectious Diseases.

Dr. E. WALFORD (Cardiff) read a paper in which he dwelt on the futility of the existing practice of granting clean bills of health by our Consuls at foreign ports to homeward-bound vessels and the urgent need for an international organisation or bureau for the collection and circulation of information as to the existence of such diseases in ports in every land. At the Sanitary Conference held at Paris in 1903 the proposal, first made at the Vienna Congress in 1874, was formulated and strongly pressed by M. Barrère, who very properly insisted that it should be strictly international and wherever located, whether as he naturally desired at Paris or elsewhere, the local government should exercise no controlling influence over it. The British delegates, for reasons that Dr. Walford could not understand, had opposed it, maintaining that their Government had already all the information that they required or could expect to obtain by means of such an office, but facts coming under the almost daily observation of our port officers showed that such was far from being the case. The only valid objection was the loss and annoyance that might be inflicted by the authorities of countries which, like Spain, adhered to antiquated beliefs and practices by refusing admission to vessels coming from, say, Liverpool or Hamburg simply because the presence of a few cases of small-pox had been reported as existing in those towns, though instances of such hardship were not unknown at present, and official information of the presence of disease in any port would be a better ground than that obtained from newspaper paragraphs for the guidance of the health officers of other ports in the inspection of vessels coming from the infected port and therefore liable to have infection on board. Medical inspection of shipping on arrival was far from satisfactory; it was compulsory in respect of cholera, plague, and yellow fever only and in the smaller ports could not be said to exist. Many cases of disease, especially ambulant small-pox, were concealed or ignored, partly through the ignorance and want of diagnostic power of the masters and partly through wilful misapprehension of their responsibility. Deaths on the voyage were misdescribed or not reported and legal technicalities aided the deception. A ship arrived from Antwerp with a case of small-pox; she had a clean bill from the Consul and the captain declared that no illness had occurred *on the voyage*, which was technically correct, since she was a tramp whose voyage ended at Antwerp, whence she returned in ballast, the patient sickening after leaving that port. Sometimes the concealment admitted of no extenuation, as when a steamer having had several cases of small-pox on board in the course of her voyage from the East Indies landed five of them at a continental port where they were sent to the hospital and proceeded homewards with a clean bill of health endorsed by the British Consul. Fortunately, Dr. Walford had had unofficial information of her history and disregarding the clean bill he inspected the crew, with the result of finding two more cases, one convalescent but still infectious and the other in an early stage of the eruption. The Registrar-General, as Dr. Walford observed, did report certain outbreaks of infectious diseases in foreign countries, but the nearest approach to a universal notification is, we believe, to be found in the weekly bulletins of the German Imperial Board of Health in which the occurrence of outbreaks or the continued presence of any of the principal infectious diseases in the more important seaports in every part of the world are reported week by week, presumably from information afforded by the consular service.

SECTION OF CHEMISTRY, PHYSIOLOGY, AND BIOLOGY.

The Dust Nuisance.

Dr. PHILIP BOOBBYER (Nottingham) referred to the many evil results of dusty occupations and especially to the dust nuisance caused by motor vehicles on dusty roads. To mitigate this nuisance streets ought to be paved, he said, with smooth and cleanable material, the sweeping of dust from houses and shops into the street should be forbidden, and motor-cars in urban districts should not run at a higher speed than ten miles an hour.

Dr. A. BOSTOCK HILL (Warwickshire) protested against the horrible practice of putting refuse from the houses in the streets for collection. It was a practice as disgusting as it was dangerous to health. The motor had accentuated the dust nuisance.

Professor H. R. KENWOOD (London) admitted that the dust nuisance was a very great one, but it afflicted motorists more than anyone else. The remedy was improved scavenging and watering and better road makers.

Dr. S. RIDEAL (London) considered that the dirt nuisance would be greatly mitigated if the hedges were cut down so as to give a free course for the dissemination of the dust over the fields.

Dr. BOOBBYER, in replying to the discussion, said they had a painful picture from motorists of their sufferings for their misdeeds. He objected to the public also suffering. He objected to having his front garden rendered uninhabitable on a Sunday afternoon by "road hogs" tearing along the road at 30 miles an hour.

CONFERENCE OF MEDICAL OFFICERS OF HEALTH.

The Milk-supply.

Dr. H. RENNEY (Sunderland) referred to the pressing need of licensing dairies, cowsheds, and milkshops. In the shops in the poorer parts of towns it was not uncommon to find a number of small shops in one street often quite close together, the proprietors of which sold from a quart to a gallon of milk per day. These shops were usually small grocers or general dealers, and on inspecting them one found the milk contained in an earthenware vessel without any covering standing on the counter. He had seen it kept in a dirty zinc pail. In close proximity to the milk were pickles, kippered herrings, onions, flour, coals, perhaps an open tin of so-called preserved meat, and even paraffin oil. The floor was dirty with a layer of dried mud from the street, the walls and ceiling were sadly in need of cleansing, and the place usually communicated with the living room, where the stock of bread was being baked, to be afterwards sold in the shop. He proposed that:—

> In consideration of the insanitary condition of the great majority of dairies, cowsheds, and milkshops which thereby renders the milk supplied, under such insanitary conditions, unfit for human consumption and dangerous to the public health this section is of the opinion that legislation is desirable to secure the licensing of all dairies, cowsheds, and milkshops in lieu of registration as at present; and this section recommends the council of the Institute to bring the proposition under the notice of the proper authorities.

Professor KENWOOD seconded the motion and suggested that the licences should be issued annually, which was accepted.

Dr. T. EUSTACE HILL (Darlington) considered that the enforcement of regulations in small districts was intimately bound up with the question of security of tenure of the official. Any dairyman could drive a coach-and-four through the model regulations of the Local Government Board.

Dr. H. E. ARMSTRONG (Newcastle-on-Tyne) believed that nothing short of a combination of sanitary authorities would solve the troubles between milk-sellers and consumers.

The motion was unanimously adopted.

SECTION OF ENGINEERING AND ARCHITECTURE.

Water-supply.

Dr. E. F. WILLOUGHBY (London) read a paper on Rural Water Supplies and urged that the county council should be empowered to authorise, or to compel, the formation of water boards for the supply of combined districts devoid of the means of supplying themselves.

We hope to be able to notice the interesting health exhibition which was held in connexion with the congress in a forthcoming issue.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF PRESIDENT.

A QUARTERLY meeting of the Council was held on July 12th, Mr. JOHN TWEEDY, the President, being in the chair.

The PRESIDENT reported the result of the recent election

of members of the Council, as published in THE LANCET of July 14th, and Mr. Henry Morris, Mr. F. Richardson Cross, and Mr. George Arthur Wright were introduced; they made declarations in the form of the oath prescribed by the charter of 1800 and took their seats as members of the Council.

On the recommendation of the Museum Committee it was resolved to print vol. iii. of the second edition of the catalogue of the physiological series of Comparative Anatomy.

A report was received from the Board of Examiners in dental surgery recommending alterations in the regulations for the Licence. The consideration of the report was postponed to the next meeting of the Council.

The PRESIDENT reported that after the election of members of the Council on July 5th the Fellows' subscription dinner was held in the library and that 65 Fellows were present.

A letter was read from the PRESIDENT of the Pharmaceutical Society thanking the Council for the practical sympathy extended to the society in connexion with the Poisons and Pharmacy Bill.

A letter was read from Mr. JOHN LANGTON expressing appreciation of the kind message sent to him by the Council on the expiration of his official connexion with the College.

Mr. J. WARD COUSINS moved and Mr. RICKMAN J. GODLEE seconded:—

That in the opinion of the Council of the Royal College of Surgeons of England it is essential for the efficient working of the Midwives Act, that adequate provision be made to secure just remuneration for professional services rendered by medical men when called into attendance by midwives practising under the Act.

The motion was carried.

Mr. HENRY MORRIS was elected President and Mr. EDMUND OWEN and Mr. GODLEE were appointed Vice-Presidents.

The following professors and lecturers were appointed for the ensuing Collegiate year. Hunterian professors: William Sampson Handley, John William Thomson Walker, John Howell Evans, William Wright, and Cecil Fowler Beadle. Arris and Gale lecturers: John Faulkner Dobson and Bertram Louis Abrahams. Erasmus Wilson lecturers: Willmott Henderson Evans, Reginald Cheyne Elmslie, and Kenneth Weldon Goadby.

The next meeting of the Council will be held on July 26th.

REPORT OF TESTS OF GRATES SUBMITTED FOR THE CONSUMPTION OF ANTHRACITE COAL.

[THIS REPORT IS SUPPLIED BY THE COAL SMOKE ABATEMENT SOCIETY.]

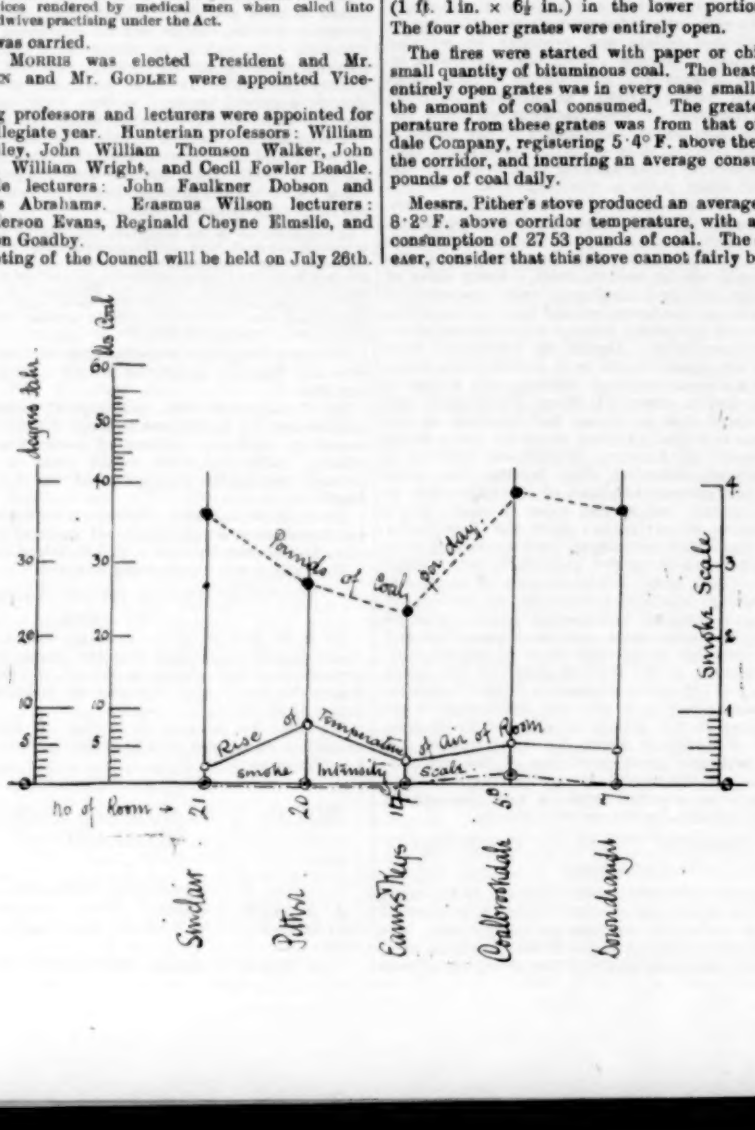
FIVE grates constructed for the consumption of anthracite coal were submitted for test—viz., by the Coalbrookdale Company, Limited, the Downdraught Company, Messrs. Eames and Keys, the Sinclair Company, Limited, and Messrs. Pither. These grates were tested on Jan. 2nd, 3rd, 4th, and 5th, 1906, by the same staff and under almost identical conditions and methods as described in our previous report published in THE LANCET of May 19th, 1906. The fires on one night were allowed to burn themselves out, which increased the amount of coal burnt as compared with the fires in previous tests.

The grate submitted by the Coalbrookdale Company for this test was identical with that tested with bituminous coal (Coalbrookdale Company).

All of these grates were open fireplaces with the exception of the grate submitted by Messrs. Pither, which, on the contrary, was almost closed, except for a small opening (1 ft. 1 in. × 6½ in.) in the lower portion of the front. The four other grates were entirely open.

The fires were started with paper or chips, wood, and a small quantity of bituminous coal. The heat given off by the entirely open grates was in every case small in proportion to the amount of coal consumed. The greatest average temperature from these grates was from that of the Coalbrookdale Company, registering 5·4° F. above the temperature in the corridor, and incurring an average consumption of 39·1 pounds of coal daily.

Messrs. Pither's stove produced an average temperature of 8·2° F. above corridor temperature, with an average daily consumption of 27·53 pounds of coal. The examiners, however, consider that this stove cannot fairly be accepted as an



"open grate" in the sense intended or as suitable where an open fire is required.

In the matter of smoke production the results afforded by the anthracite stoves are remarkable in comparison with those of stoves consuming bituminous coal, the smoke produced by the former kind being practically *nil* and imperceptible to ordinary observation.

If further efforts should succeed in securing with these results increased heat production combined with economy in fuel consumption a valuable achievement will have been accomplished, and, in the opinion of the committee, the problem is well worthy the attention of inventors and manufacturers.

The following are descriptions of the grates tested arranged in alphabetical order according to the name of the manufacturer or patentee. The descriptions are supplied by the manufacturers but their inclusion in this report is not to be taken as implying confirmation by the examiners of statements therein contained. The results stated at the foot of each description have been added by the examiners and indicate the daily average consumption of coal, the average rise of temperature, and the emission of smoke.

The Coalbrookdale Company.—The "Kyrle" open fireplace.—This fireplace is constructed to burn anthracite. The fire space is lined entirely with fire brick, the bottom being solid. The draught is through the front bars and through the narrow horizontal opening at the bottom of the fire-brick back into the back flue. Passing upwards, the external air is drawn in over the top of the fire, through another narrow slit between the back brick and a deflector brick fixed immediately above it at an angle. There are no extraordinary flues, dampers, valves, or loose doors to get out of order.

Coal, 39·1 lb. Temperature, 5·4° F. Smoke, 0·15.

The Downdraught Fireplace Company.—The "Tiffin" interior.—A downdraught flue is carried up from the bottom of the fire on either side behind the usual firebrick cheeks. These flues are made to converge to a common centre immediately above the usual adjustable canopy and thence a single flue is carried round the oven or hot chamber, finally debouching behind the same into the chimney. On the under side of the hot chamber, where the converging flues meet, a sliding soot-door is fitted, reached for cleaning purposes by removing the adjustable canopy in the ordinary way. The downdraught flue is regulated by a damper and this is actuated by a rod passing through the front of the stove. When the damper is drawn an induced draught creates a downward suction through the fire by which the smoke and heated gases are consumed.

Coal, 36·13 lb. Temperature, 4·7° F. Smoke, 0·09.

Messrs. Eames and Keys.—Cleaver's patent "cascade" fire.—An open fire for burning anthracite coal broken into small fragments; it has an automatic coal-supply whereby the fuel is replenished as it is consumed, requiring no attention or stoking. By means of a damper operated by a small handle the heat may be regulated at will or the fire extinguished.

Coal, 24·27 lb. Temperature, 3·1° F. Smoke, 0·04.

Messrs. Pither's Stove.—The stove is composed of an inner and outer casing of cast malleable iron, the area in the top part being a reservoir for coal, from which a funnel-shaped feed leads to the top of the fire, reducing the depth of fire to two and a half inches. The bars are louvre turned inwards to prevent coal falling out. The bottom is solid and arranged to tip when it is required to renew the fire.

Coal, 27·53 lb. Temperature, 8·2° F. Smoke, 0·09.

The Sinclair Iron Company.—The "Roseneath" open grate.—Combustion is regulated by a sliding shutter adjustable to suit the draught of chimneys and the temperature of the room.

Coal, 35·43 lb. Temperature, 2·1° F. Smoke, 0·02.

Table Showing the Results of Tests on Five Grates burning Anthracite Coal.

Names of firms.	Room.	Chimney.	Amount of coal (= cinders + half wood) in pounds.	Ashes in pounds.	Stoking.	Temperatures. * I.	* II.	Difference.	* III.	Smoke.
Coalbrookdale Co., Limited	5B	L	39·1	7·3	4·6	46·8	52·2	5·4	73·9	0·15
Downdraught Fireplace Co.	7	O	36·13	10·0	3·6	,,	51·5	4·7	72·7	0·09
Eames and Keys ...	14	Y	24·27	2·8	—	,,	49·9	3·1	63·5	0·04
Pither	20	A	27·53	9·0	1·0	,,	55·0	8·2	68·1	0·09
Sinclair and Co. ...	21	B	35·43	10·0	4·0	,,	48·9	2·1	67·0	0·02

Smoke.—Practically no smoke whatever. The fractional rise in the chart is the effect of the ordinary coal for lighting purposes.

* These numbers refer to the thermometers—I., in corridor; II., five feet in front of fire; III., 15 feet from fire.

Looking Back.

FROM

THE LANCET, *SATURDAY*, July 19th, 1828.

IDIOSYNCRASIES.

THAT curious, sympathetic wonder-working person, Sir Kenelm Digby, is, perhaps, the greatest detailer of singular fancies relating to antipathies and sympathies. He narrates the dire effects of flowers upon certain people, even to fainting and dying. So obnoxious was a rose to the Lady Heneage, that she had her cheeks blistered, says Sir Kenelm, by laying a rose upon it while she was asleep. It is even stated that Cardinal Caraffa, and a noble Venetian, one of the Barbarage, were confined to their palaces during the rose season, for fear of their lives.* Johannes e Querceto, a Parisian, and Secretary to Francis I., King of France, was forced to stop his nostrils with bread when there were any *apples* at table; and so offensive was the smell to him, that if an apple had been held near him he would fall a bleeding. (*Schenck. Obs. Med.*)—I saw a noble countess, says Horstius, who tasted of some udder of beef, and had her lips suddenly swelled thereby; observing that I took notice of it, told me that she had no dislike to that kind of dish, but as often as she did eat of it she was troubled in this manner, the cause of which she was utterly ignorant of. Bruverinus knew a girl, 16 years of age, who, up to that time, had lived entirely on milk, and could not bear the smell of bread; the smallest particle of which she would discover by the smell. An antipathy to pork is very common. Shenckius tells us of one who would immediately swoon as often as a pig was set before him, even though it be inclosed in paste; he falls down as one that is dead, nor doth he return to himself till the pig is taken away from the table. Marshal Albert fainted away whenever he saw the head of a boar.

The foregoing extracts are taken from a very ingenious and humorous paper in the last number of Brande's Quarterly Journal, by Mr. Wadd, entitled, "Comments on Corpulency." To the unaccountable anomalies which he has mentioned, many others might be added from various authorities, and not a few from our own personal observation. In fact, there is not a single function of the body which does not frequently afford an instance of these irregularities. The feel of velvet produces nausea and syncope with some persons: of this the family of the writer presents a remarkable case. Gaubius speaks of a man who could not withstand the emanations from a female; and Rousseau mentions a young man who was afflicted with retention of urine, on hearing the bag-pipe. Mr. Wadd has alluded to a case, in which the odour of ipecacuanha produced violent effects; nausea and sickness. We have a highly respected friend of extensive practice in the country, who, if he chance to enter a room where ipecacuanha has been used, is suddenly seized with violent sneezing, watering from the eyes, and coughing. A short time since we were in attendance upon a lady, who is invariably seized with the most violent itching and tingling in the skin, if the smallest quantity of opium be administered.

* Not long since the English newspapers announced that a certain noble duke was confined to his room with the *hay-fever*, produced by the smell of new-made hay! "Die of a rose, in aromatic pain," says Pope.

MEDICINE AND THE LAW.

Notification in Case of Measles.

Is measles a dangerous infectious disorder within the meaning of Sections 120 to 130 of the Public Health Act, 1875? Although the disease is not included in the list mentioned in the Infectious Diseases (Notification) Act, 1889, there seems no reason why it should not be so considered, if it is in fact a dangerous infectious disorder. Section 6 of the Act of 1889 enacts that in this Act the expression "infectious diseases to which this Act applies" means any of the following diseases: namely, small-pox, cholera, diphtheria, membranous croup, erysipelas, the

disease known as scarlatina or scarlet fever, and the fevers known by any of the following names—typhus, typhoid, enteric, relapsing, continued, or puerperal—and includes, as respects any particular district, any infectious disease to which this Act has been applied by the local authority of the district in manner provided by this Act. Section 7 of the same Act enacts that the local authority of any district to which this Act extends may from time to time by a resolution passed at a meeting of such authority where the like special notice of the meeting and of the intention to propose the motion has been given, as is required in the case of a meeting held for adopting this Act, order that this Act shall apply in its district to any infectious disease other than a disease specifically mentioned in this Act.

The control of measles is a subject which has troubled many local authorities and the results of notification and other means have not always been such as to encourage them to spend much money on taking additional measures. The question is one of great importance, as statistics show that no less than 13,000 deaths occur every year in England and Wales from this disease. The disease is generally looked upon as one of the inevitable ailments of infancy and many mothers think that the sooner their children have it so much the better, for then it will be over and they will no longer be liable to catch it. It seems, however, that as children get older the fatal nature of the disease becomes less marked. It is during their second year that the disease proves most fatal to children, "whilst the incidence of the attack is highest during the third, fourth, and fifth years of life." Between 90 and 95 per cent. of the deaths are among children under five years of age. This may, however, be due to the fact that by the time children in this country attain the age of five years the great majority of them have already suffered from the disease. Deaths from measles occur almost wholly among poor people. Thus children of the richer classes are better looked after, the disease is noticed sooner, and a medical man is called in. The children are isolated and properly nursed, so that serious results less often ensue from the illness. Whether it is possible to check epidemics or not is doubtful, but at present it would seem that they occur in most districts every two or three years and there can be no reason why their frequency should not be reduced. The disease is undoubtedly an infectious one and is thus probably preventable. Notification is one of the remedies that is frequently suggested and it has been tried by several local authorities. As we have seen, measles is not one of the diseases mentioned in the Infectious Diseases (Notification) Act, but it can be included if the local authority desires and the Local Government Board approves. It is notifiable in about 60 towns in England and Wales but in nearly as many other towns it has been tried for a time and discontinued. The principal difficulty in the way of notification is due to the fact that in very many cases medical men are not called in, especially in the earlier stages, when it is believed that the disease is most infectious. Another objection is that the expense is considerable and it is impossible, for want of room, to isolate the patients. One reason alleged for the frequency of epidemics is the existence of infant schools. Many medical officers of health are of opinion that the attendance at school of young children under five years of age does far more harm than good. It is among such children that the epidemic spreads most rapidly and the fact that the age limit for school children has been reduced is given as one reason why the recent efforts to reduce the mortality from measles have proved so fruitless. There are over 600,000 children under the age of five years attending elementary schools. It is among these children that the greatest incidence of attack occurs and it is when under five that nearly all the deaths occur. If it is correct that fatalities are fewer after five years of age then every attempt should be made to prevent young children from contracting the disease. The closing of schools for children under five years of age would tend to produce this effect as it would prevent them from mixing together and so spreading contagion. The best remedy at present to minimise the effect of the disease is to teach the mothers how to treat their children when ill with measles and to induce them to keep their other children at home. This has proved very successful in rural districts but it is not such an easy matter in towns and in tenement houses as the children meet and play with one another. In some districts the schools are closed during epidemics, and in others not at all.

The Jury of Matrons.

In continuation of the note in THE LANCET of July 14th, p. 118, upon the case of the woman who after being sentenced to death for murder at the recent Bodmin summer assizes pleaded pregnancy some further historical points of interest are suggested. In the olden time the mere man and even the man of medicine were supposed to be very ignorant concerning the facts of pregnancy, which were deemed to be the province of matrons, or the facts of childbirth which were presided over by midwives; the aid of the surgeon was only sought in cases of difficult or of mismanaged labours. The frequency with which women condemned at the Old Bailey or at the assizes "pleaded their belly" in pre-nineteenth century times is seemingly very remarkable until it is remembered that the records refer to "the old hanging days" when to commit any felony was a capital offence. There can be no doubt that sisterly sympathy with the accused and antipathy to the awful sentence, whether immediately or remotely executed, influenced the actual verdict of the jury of matrons much more than did the physical signs which they found. It will be remembered that the poet Gay in his *Beggar's Opera*, published in 1727, makes Mr. Peachum say of one of his associates, "She pleads her belly at worst," in stay of execution and in hope of reprieve and commutation of the capital sentence. Among the contemporary records of criminal proceedings it is not very uncommon to read that the plea of pregnancy—for that was what it amounted to in reality—was made a second time when the condemned woman again appeared in court; the fact, of course, does not speak very highly either for the expedition of justice or for the morality of contemporary remand homes. The jury of matrons was abolished in Ireland by the Juries Procedure Act, 1876. In 1882 the Parliamentary Bills Committee of the British Medical Association made representations to the Crown against empanelling such juries.

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

County Borough of Croydon.—Dr. H. Meredith Richards reports that the Croydon Corporation Bill, 1905, has now become law. This measure confers upon the corporation certain extended facilities as regards drainage and it also enables the medical officer of health to enter any public elementary school within the borough at all reasonable times and to examine the scholars attending such school. It also insures that the occupier of any inhabited building wherein there is, or has been recently, any person suffering from a dangerous infectious disease shall, upon the request of the medical officer of health, furnish to him such information as he may reasonably require. Dr. Richards is clearly somewhat anxious as regards a large portion of the water-supply of Croydon, the whole of which is derived, save for a certain part furnished by the London Water Board, from wells in the chalk. Some of this chalk is hereabouts covered with tertiary formations, while other parts of it are uncovered, and it would seem from Dr. Richards's observations that the chalk in the vicinity of Croydon is known to be fissured in places. As he observes, the question resolves itself into this: Can unpurified sewage gain access to the wells? There have been two epidemics of enteric fever in Croydon, one in 1853 and another in 1875, and in neither of these cases could the influence of the water be altogether put aside. In consequence of the last outbreak the wells were lined for a greater depth than was the case formerly but Dr. Richards fears that it is doubtful whether the record of the last 30 years can long be maintained. One of the wells has actually been abandoned in consequence of the contamination of its water and "the connexion between all four wells is so intimate that there is no guarantee that the remaining wells may not suffer a similar misfortune, especially as the area from which the wells derive their supply is becoming more and more thickly populated. The reality of this risk is emphasised by the fact that bacteriological examination already indicates occasional departures from the high standard of purity which should be maintained by wells in the chalk. A fissure is known to exist from Surrey-street (where there are several wells) to the Addington Hills and there must

therefore be some increased risk of pollution on the growth of the town in that direction." Although the sewers and drains within a radius of a quarter of a mile of these wells have been, it is said, carefully constructed and are reported to be under careful supervision we can quite understand the misgivings of Dr. Richards upon the whole question, more particularly as it is upon these wells that Croydon is dependent for the bulk of its water-supply. Filtration of this supply would certainly seem to be indicated. Dr. Richards suggests consideration by the Local Government Board of the whole question but possibly that Board might take the view that the Royal Commission on Sewage Disposal has indicated a way out of the difficulty by the appointment of Rivers Boards, which boards should have control of sewage disposal and water-supply in their districts. During 1905 a nurse was admitted into the isolation hospital under the following circumstances. Her mistress who was suffering from Malta fever left Malta with the nurse on July 2nd, reaching London on July 10th. Shortly after arrival the mistress suffered from a relapse and on August 1st the nurse who had remained with her mistress was attacked with an illness resembling enteric fever. But as the symptoms were somewhat anomalous a specimen of her blood was examined to ascertain whether it would agglutinate a culture of micrococcus Melitensis and a positive result was obtained, the subsequent course of the case confirming the diagnosis of Malta fever. The case, as Dr. Richards observes, raises some interesting speculations. Reporting to the education authority on March 23rd, 1906, Dr. Richards states that at that time there were no less than 180 children excluded from school on account of ringworm and he sets forth various reasons as to why the council should undertake the treatment of this condition. He has also, in his capacity as medical officer to the education authority, obtained data as regards the physical condition of school children and for purposes of comparison he has examined the boys in the Grammar School and the girls in the High School. The whole report as regards schools shows what a large tax the work must make upon the time of a medical officer of health and it accentuates the importance of assistance being provided for that officer.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8322 births and 3556 deaths were registered during the week ending July 14th. The annual rate of mortality in these towns, which had been 12·4 and 12·3 in the two preceding weeks, further declined last week to 11·7 per 1000, and was the lowest rate recorded in any week of the present year. During the past four weeks the death-rate in these towns has averaged 12·4 per 1000, while in London the average rate during the same period has been as low as 12·3 per 1000. The lowest death-rates last week in the 76 towns were 4·9 in Newport (Mon.), 5·6 in East Ham, 6·2 in Hastings, 6·8 in Grimsby, and 6·9 in Bournemouth; the highest rates were 17·2 in St. Helens and in Burnley, 19·8 in Huddersfield, and 20·3 in Rochdale. The 3556 deaths in the 76 towns last week were 165 below the numbers in the previous week, and included 361 that were attributed to the principal epidemic diseases, against 372 and 406 in the two preceding weeks; of these, 113 resulted from diarrhœa, 97 from measles, 59 from whooping-cough, 39 from diphtheria, 27 from "fever" (principally enteric), 25 from scarlet fever, and one from small-pox. The deaths from these principal epidemic diseases were equal to an annual rate of 1·2 per 1000 in the 76 towns and to 1·0 per 1000 in London. No death from any of these diseases was recorded last week in Rhondda, Southampton, Stockport, Walsall, or in 12 other smaller towns, while they caused death-rates exceeding 2·5 per 1000 in West Ham, Manchester, Burnley, Preston, Rotherham, and Middlesbrough. The highest death-rates from measles occurred in Manchester, Burnley, Huddersfield, and Halifax; from whooping-cough in Rotherham, Middlesbrough, and Sunderland; and from diarrhœa in West Ham, Norwich, Bootle, and Preston. The 39 fatal cases of diphtheria included nine in London, four in Liverpool, and three in Bristol; scarlet fever caused six deaths in London, four in Sheffield, and two each in Birmingham and Rotherham; while of the 27 deaths from "fever" four belonged to London, four to West Ham, and two to Oldham. The fatal case of small-pox was registered in Hull. The four cases of small-pox under treatment in the Metropolitan Asylums hospitals at the end of last week showed a further decline from recent weekly numbers, and no new case was admitted during the week. The number of scarlet fever patients under treatment in these hospitals and in the London Fever Hospital on Saturday, July 14th, was 2840, or 73 more than the number on the previous Saturday; 406 new cases were admitted during the week, against 366 and 377 in the two preceding weeks. The deaths in London referred to pneumonia and other diseases of the respiratory organs, which had continuously declined in the 12 preceding weeks from 399 to 118, were 119 last week, but were 17 below the corrected average for the corresponding week of the four years 1902–05. The causes of 33, or 0·9 per cent., of the deaths registered in the 76 towns were not certified either by a registered medical practitioner or by a coroner. In West Ham, Portsmouth, Bristol, Manchester, Salford, Bradford, Leeds, Sheffield, and in 42 other smaller towns the causes of all the deaths were duly certified; only one uncertified death was registered in London and in each of 21 other smaller towns; while there were two such cases in Sunderland and three each in Leicester, Liverpool, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 16·0, 14·5, and 15·3 per 1000 in the three preceding weeks, declined again to 14·3 per 1000 in the week ending July 14th, but was 2·6 per 1000 in excess of the rate in the 76 large English towns. The rates in the eight Scotch towns last week ranged from 10·2 in Paisley and 10·7 in Leith to 15·5 in Glasgow and in Dundee and 17·0 in Greenock. The 491 deaths in the eight towns showed a decrease of 33 from the number registered in the preceding week, and included 22 which were referred to diarrhœa, 17 to whooping-cough, 12 to measles, seven to "fever," three to diphtheria, two to scarlet fever, and not one to small-pox. In all, 63 deaths resulted from these principal epidemic diseases last week, against 59 and 50 in the two preceding weeks; they were equal to an annual rate of 1·8 per 1000, which was 0·6 above the average rate during the week from the same diseases in the 76 English towns. The 22 deaths attributed to diarrhœa in the Scotch towns showed a slight increase upon the numbers in the two preceding weeks and included 14 in Glasgow, four in Dundee, and three in Aberdeen. The fatal cases of whooping-cough, which had been nine and eight in the two previous weeks, rose last wek to 17, of which nine occurred in Glasgow, five in Aberdeen, and two in Leith. The 12 deaths from measles were slightly in excess of the numbers in the two preceding weeks, and included seven in Edinburgh and five in Glasgow. All the seven deaths from "fever," of which four were returned as cerebro-spinal fever, were recorded in Glasgow, as were also two of the three fatal cases of diphtheria. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had declined in the five preceding weeks from 95 to 52, rose again last week to 59, but were six below the number returned in the corresponding week of last year. The causes of 28, or 5·7 per cent., of the deaths registered in the eight towns last week were not certified, the proportion of uncertified deaths in the 76 large English towns during the same week being only 0·9 per cent.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 16·4 and 16·9 per 1000 in the two preceding weeks, further rose to 18·7 per 1000 during the week ending July 14th. During the past four weeks the death-rate has averaged 18·1 per 1000, the rates during the same period being 12·3 in London and 14·1 in Edinburgh. The 136 deaths of Dublin residents registered during the week under notice were 13 in excess of the number in the preceding week, and included 12 which were referred to the principal epidemic diseases, against three, five, and four in the three preceding weeks; of these, six resulted from whooping-cough, three from diarrhœa, two from "fever," and one from measles. These 12 deaths were equal to an annual rate of 1·7 per 1000, the death-rates last week from the principal epidemic diseases being 1·0 in London and

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING JUNE, 1906.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1906.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,721,217	10	1609	555	—	155	2	17	468	—	2756	7·6	—	198	39	24	77	—	20	—	68	436	1·2	4315	11·9	85
West Districts.																										
Paddington	148,913	1	44	9	—	1	1	—	12	—	68	6·0	—	4	2	1	1	—	—	—	3	11	1·0	117	10·2	69
Kensington	180,952	—	39	8	—	5	—	—	16	—	68	4·9	—	11	1	1	1	—	—	—	1	15	1·1	161	11·6	126
Hammersmith	120,679	—	51	15	—	1	—	—	15	—	82	8·9	—	3	2	—	—	—	1	—	2	8	0·9	127	13·7	94
Fulham	161,965	—	31	29	—	2	—	—	13	—	75	6·0	—	4	2	—	3	—	1	—	7	17	1·4	124	10·0	85
Chelsea	74,672	—	18	6	—	4	—	1	9	—	38	6·6	—	4	2	—	—	—	—	—	1	7	1·2	94	16·4	157
City of Westminster	173,905	—	61	20	—	7	—	—	9	—	97	7·3	—	2	1	2	1	—	1	—	3	10	0·7	174	13·0	176
North Districts.																										
St. Marylebone	128,580	—	35	12	—	4	—	1	14	—	66	6·7	—	7	1	2	1	—	—	—	—	11	1·1	121	12·3	64
Hampstead	89,633	—	22	2	—	3	—	—	4	—	31	4·5	—	—	—	—	1	—	—	—	1	2	0·3	55	8·0	75
St. Pancras	236,455	—	84	25	—	5	—	1	30	—	145	8·0	—	18	4	2	4	—	2	—	3	33	1·8	248	13·7	147
Islington	344,997	—	96	37	—	22	—	5	14	—	174	6·6	—	11	2	3	4	—	3	—	1	24	0·9	297	11·2	86
Stoke Newington	53,217	—	6	4	—	1	—	—	2	—	13	3·2	—	1	—	—	—	—	—	—	—	1	0·2	37	9·1	77
Hackney	230,721	2	68	23	—	6	—	—	21	—	125	7·1	—	8	1	2	1	—	1	—	2	14	0·8	167	9·4	75
Central Districts.																										
Holborn	55,806	—	18	1	—	—	—	—	1	—	20	4·7	—	10	—	—	2	—	—	—	—	12	2·8	68	15·9	105
Finsbury	97,466	—	37	32	—	12	—	3	10	—	94	12·6	—	19	—	2	3	—	—	—	1	25	3·3	120	17·4	74
City of London	21,367	—	21	—	—	—	—	—	2	—	23	14·0	—	—	—	—	—	—	—	—	—	—	—	26	15·9	40
East Districts.																										
Shoreditch	116,108	—	64	10	—	6	—	1	8	—	89	10·0	—	13	—	1	4	—	1	—	4	23	2·6	131	14·7	131
Bethnal Green	130,609	1	52	16	—	8	—	—	12	—	89	8·9	—	8	2	—	7	—	—	—	1	18	1·8	147	14·7	10
Stepney	307,176	—	133	67	—	10	1	—	40	—	251	10·7	—	9	4	5	1	—	1	—	6	28	1·1	331	14·1	89
Poplar	170,673	—	41	12	—	4	—	—	15	—	72	5·5	—	20	—	1	1	—	1	—	3	26	2·0	161	12·3	80
South Districts.																										
Southwark	209,143	—	85	25	—	14	—	—	20	—	144	9·0	—	10	2	1	2	—	2	—	7	24	1·5	231	14·4	94
Bermondsey	128,629	—	65	31	—	2	—	—	17	—	115	11·7	—	9	3	—	8	—	1	—	3	24	2·4	153	15·5	101
Lambeth	315,774	—	108	47	—	23	—	3	24	—	205	8·5	—	4	4	6	2	—	1	—	2	19	0·8	256	10·6	72
Battersea	179,622	—	76	12	—	2	—	1	14	—	105	7·6	—	3	—	1	11	—	1	—	3	19	1·4	120	9·4	99
Wandsworth	273,381	—	77	22	—	5	—	1	33	—	138	6·6	—	6	1	1	9	—	1	—	2	20	1·0	206	9·8	51
Camberwell	274,132	6	110	24	—	4	—	—	27	—	171	8·1	—	5	3	1	3	—	1	—	6	19	0·9	245	11·7	73
Deptford	115,495	—	34	16	—	—	—	—	8	—	58	6·5	—	4	1	1	1	—	—	—	3	10	1·1	115	13·0	97
Greenwich	105,350	—	55	19	—	1	—	—	4	—	79	9·8	—	2	—	—	2	—	1	—	2	7	0·9	77	9·5	98
Lewisham	148,463	—	43	15	—	1	—	—	4	—	63	5·5	—	2	1	1	2	—	—	—	1	7	0·6	96	8·4	45
Woolwich	127,345	—	35	11	—	1	—	—	10	—	57	5·8	—	1	1	—	2	—	—	—	—	4	0·4	80	8·2	71
Port of London	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup

1·4 in Edinburgh. The six fatal cases of whooping-cough exceeded the number recorded in any previous week of the year, the deaths from this cause in the three preceding weeks being two, one, and four. The 136 deaths from all causes in Dublin last week included 25 of infants under one year of age and 32 of persons aged upwards of 60 years. Four inquest cases and two deaths from violence were registered. The deaths occurring in public institutions numbered 61, or nearly 45 per cent., of the total deaths; in London the proportion was 42 per cent. The causes of two, or nearly 1·5 per cent., of the deaths registered in Dublin last week were not certified either by a registered medical practitioner or by a coroner; in London only one of the 1072 deaths was uncertified, while in Edinburgh the proportion was 11·6 per cent.

VITAL STATISTICS OF LONDON DURING JUNE, 1906.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 7·6 per 1000 of the population, estimated at 4,721,217 persons in the middle of the year. In the three preceding months the rates had been 5·7, 5·9, and 6·4 per 1000 respectively. The lowest rates last month were recorded in Kensington, Hampstead, Stoke Newington, Holborn, Poplar, and Lewisham; and the highest rates in Finsbury, the City of London, Shoreditch, Stepney, Bermondsey, and Greenwich. Ten cases of small-pox were notified last month, against seven, one, and six in the three preceding months; of these ten cases, six belonged to Camberwell, two to Hackney, and one each to Paddington and Bethnal Green. The Metropolitan Asylums hospitals contained 11 small-pox patients at the end of last month, against ten, six, and five at the end of the three preceding months. The prevalence of scarlet fever showed a slight excess in June as compared with the previous months of this year; this disease was proportionally most prevalent in the City of London and in the boroughs of Hammersmith, Shoreditch, Stepney, Bermondsey, Battersea, and Greenwich. The Metropolitan Asylums hospitals contained 2705 scarlet fever patients at the end of last month, against 2353, 2192, and 2462 at the end of the three preceding months; the weekly admissions averaged 354, against 238, 282, and 321 in the three preceding months. Diphtheria was considerably more prevalent than in the preceding month; the greatest proportional prevalence of this disease was recorded in Fulham, Finsbury, Stepney, Bermondsey, and Greenwich. The number of diphtheria patients in the Metropolitan Asylums hospitals, which had been 924, 860, and 760 at the end of the three preceding months, had risen again to 782 at the end of last month; the weekly admissions averaged 114, against 111, 103, and 98 in the three preceding months. The prevalence of enteric fever was greater last month than in any other recent month; amongst the various metropolitan boroughs this disease was proportionally most prevalent in Chelsea, Islington, Finsbury, Bethnal Green, Southwark, and Lambeth. There were 93 enteric fever patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 65, 56, and 41 at the end of the three preceding months; the weekly admissions averaged 20, against 11, 11, and 12 in the three preceding months. Erysipelas was proportionally most prevalent in Hammersmith, Chelsea, St. Pancras, Stepney, Bermondsey, and Wandsworth. The 17 cases of puerperal fever included five belonging to Islington and three each to Finsbury and Lambeth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending June 30th 4305 deaths of persons belonging to London were registered, equal to an annual rate of 11·9 per 1000 of the population; in the three preceding months the rates had been 16·2, 17·0, and 13·8 per 1000. The death-rates last month ranged from 8·0 in Hampstead, 8·2 in Woolwich, 8·4 in Lewisham, 9·1 in Stoke Newington, and 9·4 in Hackney and Battersea, to 14·7 in Shoreditch and in Bethnal Green, 15·5 in Bermondsey, 15·9 in Holborn and in the City of London, 16·4 in Chelsea, and 17·4 in Finsbury. The 4305 deaths from all causes in London last month included 436 which were referred to the principal infectious diseases; of these, 198 resulted from measles, 39 from scarlet fever, 34 from diphtheria, 77 from whooping-cough, 20 from enteric fever, and 68 from diarrhœa. No death from any of these diseases was recorded in the City of London; among the metropolitan boroughs they caused the lowest rates in the City of Westminster, Hampstead, Stoke Newington, Lewisham, and Woolwich; and the highest rates in St. Pancras, Holborn, Finsbury, Shoreditch, Bethnal Green, Poplar, and Bermondsey. The 198 deaths from measles were slightly above the corrected average number in the corresponding periods of the four preceding years; this disease was proportionally most fatal in St. Pancras, Holborn, Finsbury, Shoreditch, Poplar, and Bermondsey. The 39 fatal cases of scarlet fever were seven in excess of the corrected average number; the greatest proportional mortality from this disease occurred in Paddington, Hammersmith, Chelsea, St. Pancras, Bethnal Green, Stepney, Bermondsey, and Lambeth. The 34 deaths from diphtheria were 11 fewer than the average for the corresponding periods of the four preceding years; among the various metropolitan boroughs diphtheria was proportionally most fatal in the City of Westminster, St. Marylebone, Finsbury, Stepney, and Lambeth. The 77 fatal cases of whooping-cough showed a decline of 44 from the corrected average number; the highest death-rates from this disease were recorded in Holborn, Finsbury, Shoreditch, Bethnal Green, Bermondsey, Battersea, and Wandsworth. The 20 deaths from "fever" were slightly in excess of the average for the corresponding periods of the four preceding years; of these 20 deaths three belonged to Islington, two each to St. Pancras and Southwark, and one each to 13 other boroughs. The 68 fatal cases of diarrhœa were considerably below the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Paddington, Fulham, Shoreditch, Southwark, Bermondsey, Camberwell, and Deptford. In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases was nearly 16 per cent. below the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 85 per 1000. The lowest rates of infant mortality were recorded in Paddington, St. Marylebone, the City of London, Wandsworth, Lewisham, and Woolwich; and the highest rates in Kensington, Chelsea, the City of Westminster, St. Pancras, Holborn, and Shoreditch.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: J. Ll. Thomas to the *Pembroke*; W. Hackett to the *President*, for three months' course at West London Hospital. Staff Surgeons: E. G. E. O'Leary to the *Thetis*, on recommissioning; M. J. Smith and H. W. B. Shewell to the *President*, for three months' course at West London Hospital. Surgeons: A. I. Sheldon to the *Astræa*, and on recommissioning; P. G. Williams to the *Alacrity*, and on recommissioning; W. G. M. Anderson to the *Impregnable*, for the *Inconstant*; T. B. Shaw to the Royal Naval Rendezvous, lent; R. R. Horley to the *President*, for three months' course at West London Hospital; B. Pick, lent to Portland Hospital; J. J. H. Rooney to the *Blake*; W. Bastian to the *President*, for three months' course at West London Hospital; J. G. Watt to the *Sirius*; and P. L. Crosbie and J. H. le B. Page to the *Vivid*.

In accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Surgeon George Edward Glynn has been placed on the Retired List (dated July 5th, 1906); Surgeon Frederick Francis Mahon has been promoted to the rank of Staff Surgeon in His Majesty's Fleet (dated July 11th, 1906).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel John M. Nicolls retires on retired pay (dated July 14th, 1906). Captain Arthur E. Milner to be Major (dated April 28th, 1906).

INDIAN MEDICAL SERVICE.

The King has approved of the retirement from the Service of the undermentioned officer:—Lieutenant-Colonel Joseph William Townsend Anderson (dated April 15th, 1906).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major David Lennox to be Surgeon-Lieutenant-Colonel (dated June 15th, 1906).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Gloucestershire: Surgeon-Lieutenant A. Ogilvy to be Surgeon-Captain (dated July 18th, 1906).

Royal Engineers (Volunteers): 1st Devonshire and Somersetshire: Surgeon-Lieutenant-Colonel G. B. Fraser is granted the honorary rank of Surgeon-Colonel (dated July 17th, 1906); Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel G. B Fraser resigns his commission, with permission to retain his rank and to wear the prescribed uniform (dated July 18th, 1906).

Rifle: The Queen's Rifle Volunteer Brigade the Royal Scots (Lothian Regiment): Surgeon-Major A. D. Webster is borne as Supernumerary whilst holding the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, 1st Lothian Volunteer Infantry Brigade (dated July 18th, 1906). 1st Volunteer Battalion the Lincolnshire Regiment: Surgeon-Lieutenant A. S. Green to be Surgeon-Captain (dated July 18th, 1906). 4th Volunteer Battalion the Cheshire Regiment: Second Lieutenant R. Ollerenshaw resigns his commission (dated July 18th, 1906); Robert Ollerenshaw (late Second Lieutenant) to be Surgeon-Lieutenant (dated July 18th, 1906). 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers: William Lewis Pritchard to be Surgeon-Lieutenant (dated July 18th, 1906). 2nd Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derby shire Regiment): Surgeon-Lieutenant J. Buckley resigns his commission (dated July 18th, 1906). 1st Nottinghamshire (Robin Hood) Volunteer Rifle Corps: Surgeon-Lieutenant R. P. Shearer is removed from the Volunteer Force for failing to fulfil the prescribed conditions for efficiency (dated June 20th, 1906).

A FIELD HOSPITAL BURNT.

A telegram in the *Morning Leader* of July 16th, dated Durban, Sunday, states that the field hospital at Thring's Post has been destroyed by sparks from a rubbish fire. All the patients were saved but the kit was lost. The rescue of the patients was of a hazardous nature. Some were removed from the burning tent while cartridges were exploding in every direction.

THE ORGANISATION OF AN AUXILIARY MEDICAL SERVICE FOR WAR.

Captain W. Salisbury Sharpe, Royal Army Medical Corps (Volunteers), contributes to the *Journal of Preventive Medicine* for July an interesting article on the above subject in which he says: "Let us, as medical men, record the fact that we appreciate the necessity of universal service, and in the meantime try to maintain and improve the auxiliary services as a stem on which the larger service may be grafted, for we must recognise as a grave error the present tendency to break down the existing service by imposing impossibly onerous conditions, and, having done so, to cast it aside as a failure, and start anew to draw out a wider plan." He discusses his subject under the following heads: (1) Royal Army Medical Corps conditions necessitating auxiliary aid in war; (2) the existing auxiliary medical services, their adaptation for peace conditions and their want of adaptation for war conditions; (3) the kind of auxiliary aid required in war—viz., officers, men, transport, and material; and (4) means of meeting these needs.

THE ADMIRALTY AND PHYSICAL TRAINING.

In a circular letter issued on July 9th to the commander-in-chief of fleets and stations the Admiralty directs that in future the whole staff of the engine-room department of ships are to undergo physical training as far as circumstances permit in connexion with their duties. The instruction will be given by the executive officer who is responsible for physical training, subject, however, to the supervision of the engineer officer, who is also to be consulted as to when the services of the engine-room ratings and stokers can best be spared for physical drill.

DISTRIBUTION OF PRIZES AT HASLAR.

The course of instruction for surgeons of the Royal Navy at Haslar was brought to a close on July 2nd when the prizes were distributed by the Director-General of the Medical Service of the Royal Navy. The gold medal was awarded to Surgeon L. L. Greig of the University of Glasgow, the microscope to Surgeon L. Warren of the London Hospital, and the silver medal and books to Surgeon R. C. P. McDonagh of St. Bartholomew's Hospital. The names of the candidates with the marks gained are as follows:—

Leonard Warren	4610	Percy F. Minett	3862
Louis L. Greig	4447	Frederick G. Goble	3807
Reginald C. P. McDonagh	4168	John Bourdas	3633
Ewen Cameron	4128	*Herbert A. Browning ...	—

* This officer could not attend the second part of the examination owing to illness.

Correspondence.

"Audi alteram partem."

THE SENSE OF SMELL AS AN AID IN DIAGNOSIS.

To the Editors of THE LANCET.

SIRS,—The importance of the sense of smell in clinical diagnosis has sunk almost into insignificance before that of sight or even that of hearing. This is in part due to its poor development in many persons but also to neglect of its use. Bacteriology has adopted it to some extent in noticing the characteristic odours of certain cultures, but it seems to me that in some cases it is of material aid at the bedside and may with reason be admitted to medico-legal importance. One or two instances of its services in these respects may suggest others and will suffice in calling attention to its numerous applications.

1. The smell of acetone in the breath of patients with diabetic coma is well known. An instance in which this sign preceded by some hours the onset of untoward symptoms made a great impression upon me as a student. On entering a long ward containing 32 beds I approached the house physician who was examining a patient new to me. As I came near a strong ethereal smell was very noticeable and I asked the physician at once why an anæsthetic had been given, the ward being a medical one. None had, and on second thoughts—or rather a second smell—the odour was not that of ether but of acetone. Within a few hours, though at the time no suspicious symptoms were present, those of diabetic coma supervened with a fatal result.

2. Nurses in frequent attendance on typhoid fever patients describe a peculiar "typhoid" smell which, from a reliable observer, may be of great service in doubtful cases. The nurses in charge of the plague hospital at Perth, Western Australia, assure me that the patients there have a special and distinctive "sour" smell which, since my attention was called to it, I have noticed myself; still, I cannot place sufficient reliance on it as yet in my own case to consider it a certain diagnostic sign. They inform me that on entering a room where a supposed plague patient is lying they can tell at once by this means whether it is a genuine case or not. Other infectious diseases have well-known and oft-described pathognomonic smells.

3. Rheumatic fever has a characteristic sour smell associated with its acid perspiration. Some years ago I was giving an anæsthetic for a supposed case of appendicitis in a girl in whom the usual symptoms and signs of that affection were present. During the administration the patient's perspiration attracted my attention from its peculiar rheumatic-like smell. To our astonishment the appendix was found to be perfectly normal. Now the evening before I had been reading Treves's "System of Surgery" and had come upon a reference to a rheumatic affection which simulated appendicitis. Bearing in mind the peculiar odour I had noticed and mentioning it, I hazarded the suggestion that this might be a case in point. The patient was removed from the operating table, but though the wound itself showed no sign of suppuration endocarditis and pericarditis developed and death followed. Was this a mere coincidence and not a manifestation of acute rheumatism or was the hypothetical diagnosis, based on the sense of smell, in reality the correct one?

4. A piece of tissue removed from the uterus was handed to me recently wrapped in lint for examination. On unfolding it the well-known and peculiar smell of the placenta at childbirth—as far as my experience, a somewhat limited one, goes pathognomonic of pregnancy and not present in ordinary endometritic scrapings—was very noticeable. Would one be justified on this sign alone, unaccompanied by a microscopical examination, in swearing in a court of law that such tissue was placental in origin? If, as I believe, the smell *is* distinctive, it is perhaps a more reliable test even than the examination of a section, the only fault being that a "smell" cannot be "registered," so that other opinions may confirm that of the first observer.

These examples may, perhaps, show that too little use is often made of this much-despised sense of ours and that it may not only aid us materially in coming to a right conclusion but may also sometimes be our only guide.

I am, Sirs, yours faithfully,

J. BURTON CLELAND, M.D., Ch.M. Sydney,
Late Cancer Research Scholar, London Hospital;
Government Bacteriologist and Pathologist,
Perth, Western Australia.

Perth, Western Australia, June 15th, 1906.

THE PUBLIC HEALTH AND THE IMPORTATION OF FOREIGN CARCASSES.

To the Editors of THE LANCET.

SIRS,—The revelations concerning Chicago packing-house methods seem to have awakened amongst the majority of the general public a feeling of uneasiness as regards canned meats only. They look upon the chilled and frozen carcasses which we receive from America as a little inferior to English meat, but any suspicions as to its wholesomeness rarely enter their minds. Whilst I believe that it is the intention of our Government to take steps to safeguard the wholesomeness of the former class of goods, something should also be done to deal with the importation of the carcasses of foreign meat, especially as it forms such a very large proportion of our meat-supply. At the present time our inspection of such carcasses is always rendered very uncertain and must be so until we make more stringent laws. We might with advantage to ourselves frame regulations similar to those of Germany which govern the introduction of foreign meat into that country. There, as you know, such meat, whether fresh, chilled, or frozen, can only be imported in the entire carcasses, with the pleura, peritoneum, heart, lungs, kidneys, as well as the udder in cows, attached in "natural connexion." Even with these organs it is not possible always to be correct in one's judgment; yet how much more difficult must it be to give a satisfactory one from the examination our inspectors are able to make.

During the late meat famine in Germany our meat salesmen sent over there the carcasses of American cattle which had been slaughtered on their arrival at Deptford or Birkenhead. Our butchers complied with the German law as to the attachment of the internal organs, &c., and sent only the carcasses of those beasts whose internal organs were perfectly healthy, as the slightest trace of disease would preclude the passing of the carcasses as fit for food in Germany. At the same time numbers of carcasses whose internal organs presented lesions which here in England were sufficient to condemn the organs affected but not the whole carcass were not sent to Germany but dressed for sale in the English markets.

Surely if we in England will go to this trouble for our foreign customers it is not too much to ask that foreigners be made to do the same for us. As it is, if they choose, no matter what the condition of the internal organs might be if the rest of the carcass was apparently healthy, it would be good enough for England though not good enough for Germany. I am, Sirs, yours faithfully,

J. F. HODGSON,
Halifax, July 16th, 1906. Deputy Medical Officer of Health.

THE CAUSES OF LEPROSY.

To the Editors of THE LANCET.

SIRS,—Turkey in general, and Constantinople in particular, afford a very favourable field for the study of leprosy. The Ottoman capital possesses a large hospital for patients suffering from that terrible disease. It is, besides, not an uncommon sight here to meet lepers in all stages of disfigurement moving about quite freely in the streets. I have at present under my treatment two cases of leprosy and the following facts concerning them might not be without interest. The first case is that of a man about 30 years of age. He is a Jew and a member of a numerous family. They all live in one house. With the exception, however, of my patient, who is very badly disfigured, and his mother, whose symptoms of leprosy are manifested in the leonine appearance of her face, all the rest of the family—grandparents, father, two brothers, and five sisters—are perfectly healthy. As all these people lived for many years in one house, aggregating for the most part of the day in one room; as they frequently partake of their meals with one and the same spoon or fork and from one and the same dish, sometimes helping themselves quite in the oriental fashion by dipping into it their fingers (the use of forks and knives is not yet quite universal here); and as one towel, one napkin, and one sheet (I have very carefully ascertained the fact) are continually employed by all the members of the family, my patient included, who has a number of ulcerating sores on the whole of his body as well as on his face,—is it not striking that only two people are affected by the loathsome disease and that the rest enjoy what appears to be a perfect immunity? My other case is even more striking. A man, also a Jew, about 40 years of age, whose face, nose, ears, lips, eyelids and hands are literally eaten away by leprosy, affording an awful sight of mutilation, shared one small room and one bed with his old father for over 20 years. Yet the old man is perfectly free from every symptom, in spite of the fact that here, too, the same conditions and circumstances of closest intercourse, as enumerated in my first case, prevailed. The question of contagiousness or infectiousness of leprosy appears to me, therefore, in view of the above facts, to point to a negative answer.

As to the fish causation theory, so sedulously propounded by Mr. Jonathan Hutchinson, I would like to submit the following consideration. If there are places in the world where bad fish of every possible form and description, cured and uncured, are consumed in astonishingly large quantities, these places are to be found in the districts and suburbs on the banks of the Bosphorus and of the Golden Horn. Yet leprosy is there exceedingly rare and in many parts has never been known to exist. As emigration among the indigenous poor classes of the Jewish, Greek, and Armenian population (and it is these classes that enjoy so much the consuming of bad fish, especially of the so-called improperly cured *haringha*) very seldom, or almost never, takes place, the argument cannot be put forward that the infected elements might show the manifestations of the disease of leprosy after quitting the country. Then, again, in my two leprotic cases the *haringha*, very often stinking and only half cured, has been for many years a favourite dish, frequently eaten with salads, and yet the greater majority of members remained quite unaffected. I venture to think that as long as the real nature and the biological conditions of the bacillus lepræ are not exactly known the question of causation of leprosy, as well as of its contagiousness or infectiousness, will remain a debatable one.

I am, Sirs, yours faithfully,

DAVID SANDLER.

British Post Office, Constantinople, July 12th, 1906.

DENDRITES AND DISEASE.

To the Editors of THE LANCET.

SIRS,—May I be permitted to draw attention to certain remarks made by Sir William Gowers in his lecture on Dendrites and Disease, published in THE LANCET of July 14th, p. 67. In the first place, he states without any qualifying remarks that the terminal branchings of the nerve cell processes do not unite, "they end in contiguity to others, not in continuity with them." This is a view by no means universally held at the present time by neuro-histologists; and, moreover, it is one which year by year as new appearances are brought to light in nervous tissue by more delicate technique is becoming more widely doubted. Sir William Gowers confines his remarks on what he terms "facts of structure" in nervous tissue to appearances presented by this tissue after treatment with silver, according to one or another modification of Golgi's method. On the vexed question of thorns or gemmules he says: "By silver staining they [the dendrites] are revealed and seen to end in

a small knob or in a point, and their terminal portion bears small bud-like projections on the surface. It is this fact of their termination (discovered by Ramon y Cajal) which is relied on as evidence of the discontinuity of the neurons."

Now, whilst it is perfectly true that in silver impregnated tissue the appearance is such as he describes, surely this is no warrant for definitely concluding that because this particular method fails to show anything in structural relationship to the apparently terminal knobs therefore nothing exists. The neuron doctrine must be in a parlous state if it has to rely upon appearances revealed by one method which are refuted by other and more delicate methods.

Methylene blue when appropriately applied forms the basis of one of these newer methods which reveals structures infinitely more delicate than those shown by the silver impregnation used by Ramon y Cajal. It gives a picture which throws grave doubts on the accuracy of much that is shown by silver. Amongst other new details which it reveals it clearly shows that the little lateral projections appearing as terminal by the silver impregnation method are in reality long beaded fibrils, the course of which can often be traced in the matrix for very considerable distances. Dr. Alexander Hill long ago pointed this out even in silver preparations which do occasionally show it.

Finally, Sir William Gowers is not quite accurate when he states that "before staining agents can reveal structure hardening agents have to increase the consistence of the substance and multiply many times any original difference that exists." This does not quite apply either to Ehrlich's "vital" method or that which I have described as the "pseudo-vital" method. In both of these the stain is applied to the tissue prior to any hardening agent and in both cases with very little question success depends upon chemical interchanges between the tissue and the stain, which the addition of a hardening agent would render impossible. I am, Sirs, yours faithfully,

JOHN TURNER.

Essex County Asylum, Brentwood, July 14th, 1906.

THE WORKMEN'S COMPENSATION BILL.

To the Editors of THE LANCET.

SIRS,—On comparing the above Bill as recently amended in Committee with the extracts from the printed Bill of paragraphs affecting the medical profession which appeared in THE LANCET of April 21st last I find that the only alteration made is in Paragraph 15 of the first schedule. By the first alteration the workman is placed on an equality with the employer as to being able to obtain the certificate of his own medical attendant and use it, and I believe this will be considered as only just. In the second alteration the medical referee may in his discretion, in certain circumstances, decline to give a certificate. I think in this case he should be required shortly to state the grounds for his refusal for the information of all parties interested. I have put the additions to the clause in italics.

First Schedule (15).—A workman shall not be required to submit himself for examination by a medical practitioner under paragraph (4) or paragraph (14) of this schedule otherwise than in accordance with regulations made by the Secretary of State, or at more frequent intervals than may be prescribed by these regulations. Where a workman has so submitted himself for examination by a medical practitioner, *or has been examined by a medical practitioner selected by himself, and the employer or the workman, as the case may be*, has within six days after such examination furnished *the other* with a copy of the report of that practitioner as to the workman's condition, then in the event of no agreement being come to between the employer and the workman as to the workman's condition or fitness for employment, the registrar of a county court on application being made by *either party*—(*a*) may, on payment by the applicant of such fee not exceeding £2 as may be prescribed if the application is made before the amount of the weekly payment is settled; and (*b*) shall without any fee if the application is made for the purposes of review after the weekly payment is settled, refer the matter to a medical referee. The medical referee to whom the matter is so referred shall, in accordance with regulations made by the Secretary of State, give a certificate as to the condition of the workman and his fitness for employment, specifying, where necessary, the kind of employment for which he is fit, and that certificate shall be conclusive evidence as to the matters so certified. Where no agreement can be come to between the employer and the workman as to whether or to what extent the incapacity of the workman is due to the accident, the provisions of this paragraph shall apply, if both parties so agree in writing, as if the question were a question as to the condition of the workman, *provided that the medical referee, if he considers that the evidence before him is not sufficient to enable him to give a conclusive decision, may decline to give a certificate.*

I am, Sirs, yours faithfully,

ALBERT BENTHALL, F.R.C.P. Edin., &c.

Fellows-road, N.W., July 10th, 1906.

A NEW METHOD OF STAINING ENCAPSULATED MICRO-ORGANISMS.

To the Editors of THE LANCET.

SIRS,—Many methods of staining to show simultaneously the organism and its capsule have been recommended from time to time but none of them have been at all certain in their results. In these circumstances it might be worth while to record that with the following method we have been able to get satisfactory and certain results here. The specimen is first stained from three-quarters of a minute to one minute in the ordinary carbol-fuchsin solution and then afterwards for one minute in the following solution as a differential stain: mercuric chloride, 0·1 gramme; and water and alcohol, of each 25 cubic centimetres. The micro-organisms are stained bright red and are clearly seen; the capsule remains colourless against the general pink ground. This stain is permanent and I think can safely be recommended for demonstrating encapsulated organisms. In staining sputa the specimen should be kept for one and a half minutes in the carbol-fuchsin and for two minutes in the special solution.—I am, Sirs, yours faithfully,

Dr. HANS SCHÄDEL.

Pathological Laboratory, "Dreadnought" Hospital, Greenwich, S.E., July 14th, 1906.

HYGIENIC MEASURES AGAINST SYPHILIS.

To the Editors of THE LANCET.

SIRS,—Dr. C. R. Niven asks "What is morality?" He may remember a definition in Professor T. Clifford Allbutt's "System of Medicine" that "The essential of vice is the instant indulgence of desire at the cost of future disadvantage." I know no clearer statement than this of the real meaning of immorality which can thus hardly be said to be "a matter of instinct rather than of ratiocination." And certainly it is by no means rare to find in England that vice is avoided simply because it is not worth the risk of venereal disease. Not a high motive truly, but sufficient to prove that desire is not so ungovernable as Dr. Niven would seem to believe. By removing the hedge of the risk of syphilis from the margins of "the narrow way" we simply should eliminate an important restraint, especially for that increasing class whose actions are becoming more and more influenced by reason than by instinct. But has Dr. Niven any figures to bring forward to prove that "regulation of vice" *does* limit the ravages of venereal disease? No. The real fight against syphilis should be part of the campaign against luxury, which, for example, prevents the well-educated, decently born, industrious, and temperate medical man from marrying and having a family till he is 30–35 years of age.—I am, Sirs, yours faithfully,

Manchester Fever Hospital, July 7th, 1906. ERIC M. WILKINS.

THE TREATMENT OF RINGWORM.

To the Editors of THE LANCET.

SIRS,—I was very much interested in Mr. T. Jackson's letter on the treatment of ringworm in THE LANCET of June 30th and I am glad to see that there are still some who appreciate the value of less expensive treatment than that of manifold exposures to the x rays for that troublesome disease. For a short time I used liquor epispasticus in much the same way as Mr. Jackson suggests, but instead of diluting it with glycerine I used the full strength. On the whole the results were satisfactory and I was pleased with my success, until I was called in to see a man whom I had treated in this way. He was suffering from acute headache and sickness, his face was puffy, and his urine was thick with albumin. Luckily the nephritis was transient and disappeared after hot packs and purgatives had been exhibited. Since that time I have had many opportunities of carrying out the line of treatment as suggested by Mr. J. Stafford Mellish in the *Hospital* of June 30th—namely, the rubbing in of formic aldehyde (40 per cent.). The cures are quicker and more certain than with liquor epispasticus and there is no danger of setting up acute nephritis. The worst case of ringworm which I have ever seen, covering the whole head, was treated by Mr. Mellish a short time back with one rubbing in of formic aldehyde and then the application of ung. hydrarg. oxid. flav. dil. In a fortnight the disease was

dead and the hair began to grow again before the month was over. The cases of tinea circinata under this treatment disappear like magic under one application. Of course, in many cases of tinea tonsurans more than one application may be found necessary but never more than three. The efficacy of formic aldehyde in the treatment of ringworm is, no doubt, in great part due to the pungency of the vapour which penetrates down into the hair follicles and destroys the cocci. I am, Sirs, yours faithfully,

Tetbury, Glos., July 14th, 1906. DESBOROUGH BRODIE.

A FAMILY TENDENCY TOWARDS FRACTURE OF THE PATELLA.

To the Editors of THE LANCET.

SIRS,—The following series of facts is, I think, of some general interest and therefore worth recording.

In the Westminster Hospital, under Mr. C. Stonham, senior surgeon, there is at the present time a patient, aged 38 years, with a transverse fracture of his right patella. Nine years ago the same man fractured the left patella. His father when 20 years of age fractured his left patella; one brother when 32 years old fractured his right patella; and another brother at the age of 35 years also broke his right patella. All accidents were the result of indirect violence, and all are healthy men and carry on different trades. I am, Sirs, yours faithfully,

J. H. HEBB,
House Surgeon.

July 14th, 1906.

MUMPS AS AN AILMENT OF ADULTS IN THE ARMY.

To the Editors of THE LANCET.

SIRS,—I should like to add a word or two in support of the efforts made by recent writers to secure more serious consideration for the disease known as mumps, for the malady is still regarded by the majority of people as of a trivial character.

A small outbreak occurred among some troops under my medical care. There were only 11 cases but no less than five of these had complications of a severe nature. Four men had orchitis which, in at least one case, will probably lead to atrophy of the testicle or testicles (one man having had double orchitis). In three instances it was orchitis which led to the diagnosis. One man had double iritis on the twelfth day after onset of the disease. In three cases the temperature was 104° F. for more than one day—one of these men had intense headache and delirium, indicating cerebral disorder. The remaining complication or rather sequel took the form of great weakness of the lower limbs, which symptom became marked in one man after he had returned to duty. The patients were all isolated—the total loss of working days was therefore considerable. The cases are of recent date and may yet be followed by serious after-effects, such as, for instance, deafness.

I am, Sirs, yours faithfully,

F. SMITH,
Major, Royal Army Medical Corps.

NOTES OF TWO OUTBREAKS OF DIPHTHERIA SUCCESSFULLY STAMPED OUT BY THE FREE USE OF PROPHYLACTIC INJECTIONS OF DIPHTHERIA ANTITOXIN.

To the Editors of THE LANCET.

SIRS,—The free use of prophylactic injections of diphtheria antitoxin has proved so successful in stamping out outbreaks of diphtheria in two very susceptible communities under my care that the instances seem worthy of record.

1. In a girls' school containing 16 boarders and six day scholars a boarder fell ill on March 13th, 1906, with diphtheria. The following measures were at once taken: (1) the school was broken up; (2) all the day scholars received a prophylactic injection; (3) all the boarders were sent to their homes with a strongly worded appeal that they should receive an injection (in 13 instances this advice was taken; in two cases isolation and medical supervision were substituted); and (4) the mistresses and inmates of the school-house were injected. These measures were completely successful and no second case occurred.

2. In a second and contiguous girls' school containing 60 to 70 day scholars and six boarders, a day scholar fell ill with diphtheria on March 23rd, 1906. As this scholar had attended school for some days no further steps were taken than the injecting of the child's household and a notification to the head mistress to at once report any case of illness. On March 29th, however, a second day scholar fell ill with the disease. The school being too numerous to inject in every case I judged it sufficient (1) to inject all the class mates of the two cases; (2) all the boarders; (3) a few other scholars who, being friendly with one or other of the two cases, were known to be contacts; (4) the school was broken up; and (5) all parents were requested to notify at once any case of illness. No further case occurred.

The following general remarks suggest themselves to me. The prophylactic injection used in each case was 1000 units. Each of the three cases was of a severe type and in each case Klebs-Löffler bacilli were proved to be present. None of the children developed any serum disease. Two of the adults developed transient urticaria and one muscular pains in addition lasting a few days. No connexion could be traced between the outbreaks in the two schools; this connexion, however, must have occurred, as there have been no other cases of this disease in the neighbourhood for a considerable time and the interval of ten days between the cases is about the time which experience has taught me a contact is usually found to be suffering from the disease. When one thinks of the ease with which these two outbreaks were stamped out without loss of life and without any serious trouble or risk one cannot be too thankful that we have at our command so potent a preventive as the serum. Without serum the outbreaks would probably have spread widely, as the two schools are attended by children of all ages from five to 16 in constant association with each other, both in and out of school.

I am, Sirs, yours faithfully,

WILLIAM BLIGH, M.D., B.S. Lond.

Caterham Valley, July 14th, 1906.

INACCURATE TEXT-BOOKS.

To the Editors of THE LANCET.

SIRS,—The position of a medical man working a general practice single-handed and at the same time attempting to read for the D.P.H. is not an enviable one, for he is absolutely dependent for his knowledge upon his reading altogether unaided by the systematic teaching of his hospital days. How important then is it to be able to rely upon a good, sound, up-to-date text-book as a foundation for one's reading. With this object I obtained a certain well-known text-book, which has been before the public 16 years, and of which a revised edition appeared less than a year ago. From this I have already learnt the following astonishing facts. That air contains 5 per cent of argon; that proof spirit contains only 42·7 per cent. absolute alcohol by volume; that rectified spirit contains 16 per cent. of water; that the formula for milk-sugar or lactose is $C_{12}H_{24}O_{12}$, and that of stearin $C_{21}H_{40}O_6$; that the proper way to join a drain to a sewer is to connect the drain with the *lower* half diameter of the sewer; that potassium *bi*chromate—i.e., the red chromate—is the usual test for lead; that in making a quantitative examination for calcium in water the amount should be calculated from the weight of the calcium *oxide* formed by ignition; that Gaertner's bacillus ferments lactose and sometimes dextrose (in this statement I think the authors have Muir and Ritchie on their side but no one else); that—but what need to continue? Surely, Sirs, it would go hard with one if he made such statements before the examiners.

I am, Sirs, yours faithfully,

July 14th, 1906. BETA.

*** Two examples which "Beta" gives are surely not inaccuracies. It is the fact, for instance, that rectified spirit contains 16 per cent. of water and, again, $C_{12}H_{24}O_{12}$ is the correct though empirical formula for milk-sugar. It is, of course, better represented as $C_{12}H_{22}O_{11}H_2O$.—ED. L.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Salford Workhouse and Infirmary.

AT a recent visit to the Salford workhouse Mr. H. Jenner-Fust, the Local Government Board inspector, gave some criticisms which show that there is still room for improvement in the management. He spoke of the large number of infirm and helpless inmates and suggested that they should be looked after during the night by a paid attendant. He also said that the basement where the old men sat and smoked was a "miserable place," used for peeling potatoes, and he asked that they "should be kept upstairs in the day room. The atmosphere downstairs was not of the best." These improvements may well be carried out without provoking the suspicion that Salford wishes to rival metropolitan Poplar. The establishment of the Culcheth cottage homes has led to the lessening of pressure on the workhouse owing to the removal of many of the children and it was satisfactory to hear of the success of the homes, "the children being extremely healthy and their teeth particularly good." It appears that there are some spare homes at Culcheth which are going to be occupied by children from the Leigh union.

Death of Mr. W. L. Saunder.

The Manchester Royal Infirmary has suffered a severe loss in the death of the general superintendent and secretary, Mr. W. L. Saunder. He died on July 10th, after an illness of several weeks, at the age of 66 years. Appointed secretary in 1873, his service to the infirmary was of 28 years' duration. Sprung from a family of soldiers he passed some of his early years in the Suffolk Regiment and did duty for a time at the Cape of Good Hope. Just before the abolition of purchase he sold out and became secretary to the Royal United Hospital at Bath, which he left for Manchester. He was a disciplinarian but possessed the gift of tact and the power of organisation in a high degree, fostered, no doubt, by his experience of military affairs, and these powers were for the rest of his life devoted freely to the interests of the infirmary, to the great advantage of that institution and the public. He soon gained the confidence of the infirmary authorities and this confidence continued through all the changes that time brought with it among those who year by year sat at the infirmary board.

A Case of Anthrax.

On July 14th the Bradford coroner held an inquest on a wool viliyer, aged 77 years. He had been engaged in manipulating Russian camel-hair. It was stated that he went home from his work about noon on the previous Saturday, complained of pain and felt sick, and had no appetite. The same afternoon he fainted and was unconscious for ten minutes. On the next day he was worse and death took place on Tuesday night. Dr. F. W. Eurich, who made a post-mortem examination, said that the state of the organs and the body generally "was scarcely consistent with deceased having died from anything but anthrax, and as what he did find was consistent with that disease he was of opinion that death was due to anthrax by inhalation." In reply to a question he said that it was rarely possible to find anthrax bacilli 30 hours after death.

Food and the Ship Canal.

The Manchester Ship Canal is in the peculiar position of being righteous against its will. It has been unable to escape from having powers conferred on it to examine, and if need be to condemn, food, while some other ports are in a position of greater freedom and less responsibility. But though the recent decision may for a while, among the unthinking and the manufacturers of inferior foods, tell against its trade, to those who look at the matter from another point of view it will tend to its advantage. The satisfactory passing of severer tests than those applied elsewhere gives a valuable testimonial to the quality of the food-stuffs that come up the canal. Before long surely the tests at all ports of entry will be kept at the same standard but in the meantime the fact that food has come by the Manchester Ship Canal will be a strong point in its favour.

July 17th.

LEEDS.

(FROM OUR OWN CORRESPONDENT.)

The Leeds and West Riding Medico-Chirurgical Society.

THE annual report of this society has just been issued to its members. The session 1905–06 was the thirty-fourth, for the society was founded in the year 1872, meeting for the first time under the presidency of the late Dr. Chadwick, with the late Mr. A. F. McGill and Dr. West Symes as honorary secretaries. The past session has been a remarkably successful one in many respects. Mr. Edward Ward has been an excellent president and his brilliant, amusing, and withal highly instructive introductory address will long be remembered by all who heard it. The society, which draws its members from even a wider area than its name would appear to imply, now includes 333 ordinary members. During the past session 11 meetings have been held—seven ordinary, two pathological, and two clinical. The average attendance of members was 76. At the annual meeting, held on May 4th, Dr. A. H. Bampton of Ilkley was elected president and Mr. Edmund Robinson of Leeds and Dr. W. H. Cheetham of Guiseley were elected vice-presidents. One of the attractions of membership of this society is that its library is amalgamated with that of the medical school of the University, to the use of which and of the reading room members have full access. By this amalgamation the number of books purchased and the number of scientific periodicals taken are much greater than if the two bodies were acting independently.

Post-Graduate Course at the Leeds Public Dispensary.

The first course of post-graduate study at the Leeds Public Dispensary has proved highly successful. That there has been a demand, real though not loudly expressed, for such a course in Leeds has been proved. The honorary staff of the dispensary took up the consideration of instituting such a course some months ago. The success of the inaugural meeting was assured by the presence of Mr. Jonathan Hutchinson who addressed a large meeting of the profession in the new dispensary buildings on April 30th and gave valuable counsel as to how such a course should be conducted. The committee decided that the course should be of an eminently practical character and should consist of demonstrations, clinical and pathological, rather than of lectures, and this policy soon rendered it necessary to limit the class to 25, for a good many more than that number expressed a wish to attend. The course was conducted by six members of the honorary staff, each of whom gave a couple of demonstrations. Mr. H. Littlewood and Mr. B. G. A. Moynihan were invited to deliver a lecture each, the former selecting as his subject "Appendicitis" and the latter "The Treatment of Enlarged Prostate"; Dr. T. Wardrop Griffith gave two demonstrations on pathological specimens and clinical cases of Mitral and Aortic Valvular Disease; Mr. E. F. Trevelyan's afternoons were devoted to selected cases of Infantile Palsy and of Pulmonary Phthisis; Dr. W. H. M. Telling showed cases of Skin Disease and cases of Lung Disease in Childhood; Dr. Douglas Seaton's demonstrations were on cases of general surgical interest; Mr. Michael A. Teale discoursed on the Methodical Examination of the Eye; and Dr. O. C. Gruner gave demonstrations on the Clinical Examination of the Blood. The meetings lasted from one and a half to two hours, were extremely well attended, and were so much appreciated that the secretaries are considering the advisability of arranging for either a repetition of the course or a continuation series of demonstrations to be given.

July 17th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

The Health of Cornwall in 1905.

THE annual report of vital statistics for the county of Cornwall for 1905 has just been published. This states that during the year 7101 births were registered, corresponding to a rate of 22·31 per 1000, as compared with 22·31 in 1904. 5133 deaths occurred, giving a rate of 15·90 per 1000, against 14·72 in the previous year. The zymotic death-rate was 0·862 per 1000, compared with 0·573 per 1000 in 1904.

1322 cases of infectious diseases were notified, as against 789 in 1904. 15 deaths occurred from typhoid fever.

Rhondda and Pontypridd Water-supply.

About two-thirds of the houses in the Rhondda valleys and most of those in the adjoining town of Pontypridd are supplied with water collected from the high lands and stored in a reservoir of 200,000 gallons capacity situated at the head of the Rhondda Fach or Little Rhondda. From time to time during the past ten years there has been a peaty discolouration of this water and although chemical and bacteriological examination has shown it to be of excellent quality many of the inhabitants, on account of the discolouration, have resorted to questionable supplies from mountain streams and elsewhere, resulting on one occasion in an outbreak of typhoid fever. Although the nature of the gathering ground has from the first suggested the possibility of the water possessing a plumbo-solvent action it is only quite recently that such action has been detected. In one part of the Rhondda urban district there have been definite cases of plumbism and the medical officer of health (Dr. J. D. Jenkins) has deemed it desirable to issue circulars to the inhabitants of the affected area advising them to draw off from the pipes every morning about a gallon of water before using it for drinking purposes. The water supplied to a house in Pontypridd, closely adjoining the Rhondda district, has been examined at the Cardiff and County Laboratory, when 0·31 grain of lead to the gallon was found in one sample and 0·17 grain in another. Both samples were taken on the same day.

Water-supply for Upton Scudamore.

Miss Wheeler of Warminster has given £450 for the purpose of providing a water-supply for the village of Upton Scudamore (Wiltshire).

Provincial Meeting of the Incorporated Society of Medical Officers of Health.

The proceedings connected with the annual provincial meeting of the Incorporated Society of Medical Officers of Health usually occupy only a portion of one day. This year being the jubilee of the society they have been prolonged over two days. On the afternoon of July 14th a meeting, presided over by Sir Shirley F. Murphy, was held in the Guildhall, Bath, when Mr. C. S. Loch, LL.D., secretary of the Charity Organisation Society, read a paper upon the Relation of Sanitary Authorities to Charitable Societies, in which he pointed out what these two bodies might do in coöperation both in individual cases and in special areas. He first of all showed that although in recent years there were better health and a lower rate of mortality than formerly, yet there were more dependence on the Poor-law and a larger expenditure of charitable resources. This, he maintained, ought not to be, for increased strength in one quarter should imply additional force in another. Better health should mean greater force of character, more independence, and greater self-support. He insisted that both on the sanitary authorities of the country and on the charities the duty was imposed on behalf of the nation of preventing deterioration and as far as possible the misery that comes with it and of improving the conditions of the poor. He dwelt with emphasis upon the importance of imitation, especially with a low scale of intelligence, as a factor for good or evil. A's clean room makes B's look dirty and one man's open window is discussed by his neighbour who fastens his own down. He advocated the appointment of health visitors who should act in close coöperation with the medical officer of health but who should take no active part in the administration of relief, although they should be in constant touch with the officers of the Poor-law and with charitable societies. In the discussion which followed there was a general agreement with the views of the reader of the paper, although Dr. J. R. Kaye expressed a doubt as to the willingness of the ratepayer to set up a separate centre for health visiting and cognate work.—Dr. D. S. Davies considered that charitable societies might very well come closer together and work in greater unity with sanitary authorities.—Sir Charles A. Cameron said that already in Dublin there was much useful work done in the direction desired by Mr. Loch, and Dr. Lionel A. Weatherly considered that the coöperation indicated would be of inestimable value in preventing the spread of consumption. He described as a crying scandal the fact that only 23 of the 679 boards of guardians in this country were doing anything to treat people who were suffering from the disease.—In the evening the members of the society and others dined together at the Empire Hotel. Mr. D. Maclean, M.P., gave the members a message from the President of the Local Government Board, in which he attributed the improvement of the condition of the people to the efforts of medical officers of health. In proposing the toast of the society, Mr. Maclean said that he hoped that the Public Health Bill which was now before Parliament and which sought to give to medical officers of health greater security of tenure of office would soon be placed upon the Statute Book.

Death of Gwilym Evans, L.R.C.P. & S. Edin., L.F.P.S. Glasg.

Mr. Gwilym Evans died at his residence, Blaengarw, Bridgend, Glamorganshire, on July 8th, after a short illness, in his forty-third year. The deceased, who received his medical education at St. Bartholomew's Hospital and Glasgow, took the L.R.C.P., L.R.C.S. Edin., and L.F.P.S. Glasg. in 1888, and shortly afterwards commenced practice at Blaengarw. He was for the past 16 years surgeon to the Ocean Collieries. He was very popular and was highly esteemed for his generosity to the poor. He took a great interest in educational matters and was for some time chairman of the Ogmore and Garw school board. He leaves a widow with whom much sympathy is felt. The funeral took place on July 11th at Nantymoel, where Mr. Evans was born, and was largely attended.

July 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

School of Medicine of the Royal Colleges, Edinburgh.

AT a meeting of the governing board of the School of Medicine of the Royal Colleges, Edinburgh, the secretary and registrar, Mr. R. N. Ramsay, reported that the number of students attending the school during the winter session 1905–06 was 1284 and during the summer session 1906 the number was 996.

St. Andrew's Ambulance Association.

The annual meeting of this association was held last week in Glasgow, the Marquis of Breadalbane, president of the association, being in the chair. The twenty-third annual report, which was read at the meeting, shows that during the past year in Glasgow alone the number of calls has been 4396. Out of the total 2708 were cases of accident, while 1688 were cases of illness. In 176 cases the wagons were not required on arrival. Of the 2708 calls to accidents, 866 were from police offices, houses, and stairs; 929 were street accidents, 352 were from public works, 230 from docks and wharves, and 155 from railways and stations. The Royal Infirmary, the Western Infirmary, the Victoria Infirmary, and the Maternity Hospital received 3624 of the total number of cases, the remainder being taken to their homes or other institutions. Owing to the generosity of two Glasgow gentlemen the council of the association has been able to place with the Argyll Motor Company, Limited, an order for a four-cylinder 16–20 h.p. motor ambulance wagon for use in the Glasgow area. This will necessitate increased expense in the upkeep and an appeal has been made to the public for more support.

Dumfries Hospital Dispute.

In connexion with the erection of the new hospital for infectious diseases to be built near Dumfries there has been a good deal of friction between the various parties concerned. The burghs of Dumfries and Maxwelltown some time ago agreed to combine in the erection of a fever hospital. The Dumfries council selected a piece of ground on its own property at Castledykes as the site, and secured the approval of the Local Government Board. Maxwelltown then objected to the situation, being close to Dumfries sewage works, and they were supported in their objections by Dr. J. Maxwell Ross, medical officer of the burgh. A public meeting of the ratepayers of Dumfries was next held, when the site was unanimously condemned and the council was requested to look out for a new site altogether. Finally the town council met and decided to ignore the finding of the public meeting. Last week, however, the town clerk of Dumfries received a letter from the Local Government Board suggesting to the council that it should seek a new site.

Caledonian Medical Society.

The twenty-sixth annual meeting of this society was held last week in Stirling public hall under the presidency of Dr. W. A. Mackintosh of Stirling. There was a representative attendance from both sides of the Border. In his presidential address Dr. Mackintosh dealt with the present position and prospects of the Gaelic language. He referred to the apathy of the Gaels in Scotland in regard to the matter and showed that the only way to prevent the language from entirely dying out was by systematic teaching in the schools. The Scottish Education Department had done a great deal in providing opportunities for learning Gaelic and he hoped that advantage would be taken of these. In the evening the annual dinner of the society was held in the Golden Lion Hotel.

Aberdeen Public Health Committee.

A meeting of the public health committee of the Aberdeen town council was held on July 11th. Letters were read from the British Women's Temperance Association requesting that several copies of circulars and posters issued by the association should be circulated throughout the city bearing the signatures of the Lord Provost, the town clerk, and the medical officer of health. Councillor Kemp spoke strongly in favour of this being done. Councillor Dunn also supported the proposal but the committee could not see its way to grant the application and it was ultimately decided to request the medical officer of health to prepare a circular pointing out the detrimental effects on the health of the citizens of the excessive use of alcohol and to submit the circular to a future meeting of the committee. It was agreed to give effect to a request put forward by the Local Government Board to draw up a circular, to be circulated by medical practitioners and others, with reference to the feeding and treatment of infants by their parents. The sanitary inspector was instructed to appoint two female health visitors in place of the one retired at a salary of £65 or £70 per annum. The committee visited the City Hospital and found everything in good order.

Quatercentenary of the University of Aberdeen.

The subcommittee consisting of the conveners of the several committees having charge of the arrangements in connexion with the celebrations has adopted the following programme subject to the approval of the general committee:—

Tuesday, Sept. 25th.—10.30 A.M.: Service in the chapel at King's College. 2.15 P.M.: Procession to the Strathcona Hall (the temporary hall which is to be erected on the vacant ground in Gallowgate for the accommodation of from 4000 to 5000 persons). 3.30 P.M.: Presentation of the addresses from other Universities and from learned societies in the Strathcona Hall. 8 P.M.: Town council banquet in the Music Hall. 8 P.M.: Students' torchlight procession.

Wednesday, Sept. 26th.—11 A.M.: Conferring of degrees in the Mitchell Hall. 2 P.M.: Sports at King's College. 3 P.M.: Reception by the University at King's College. 8 P.M.: Students' ball in the Music Hall. 9.30 P.M.: Reception in the Art Gallery.

Thursday, Sept. 27th.—1 P.M.: Arrival of the King at Marischal College and opening of the new University buildings by His Majesty. 8 P.M.: The Chancellor's dinner in the Strathcona Hall. 9 P.M.: Town council's fireworks display.

Friday, Sept. 28th.—Excursions in the city and neighbourhood in the early part of the day. 9 P.M.: "At home" at Marischal College. 10 P.M.: Students' symposium in the Strathcona Hall.

Aberdeen Lunacy Board.

At a meeting on July 10th the chairman said it was gratifying to see that the estimate, compared with last year, for the upkeep of the asylum buildings and plant was lower by £250. It seemed to him that there had been good management on the part of Dr. C. Angus, the medical superintendent, and Mr. Peters, the steward. During the past year they had maintained 419 patients at £10,517. The estimate for 436 patients for the current year was £10,700—£1130 less than the amount paid in 1903 and £1456 less than in 1904. The amount to be raised by assessment for the providing account was £9519, a less sum compared with last year's accounts. The reduction of the tax would in consequence amount to from one farthing to three-eighths of a penny in the pound. He was sorry that Dr. Angus was not with them that night and they hoped he would have a speedy recovery. Dr. Angus deserved their best thanks for his services at the asylum. Referring to the Banff Asylum, the chairman said that in 1868–69—when the buildings were new—the cost for maintenance and providing per patient was £37 13*s.* 8*d.*; in 1903–04 the providing account was reduced to £5 12*s.* 3*d.*, the net cost of both maintenance and providing being £37 8*s.* 10*d.* That showed that as time went on there was a tendency, with good management, to reduce the cost of the maintenance of lunatics.

July 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Irish Medical Association.

THE committee of council of the Irish Medical Association held a meeting at the Royal College of Surgeons on July 10th. Seven new members were elected and the following motion was carried:—

The committee of council strongly urge upon the secretaries of the county branches the necessity to have inserted in the local newspapers extracts from the "Journal" relating to the unions in which the salaries of medical officers have been revised, and all other matters which would seem to improve the condition of the dispensary medical officers.

The Tinned Meat Scare.

The public analyst of Belfast has reported to the public health committee that during the quarter ended June 30th 491 samples have been sent for analysis, a much larger number than can be done carefully and skilfully by one person, and he asks that if the number be continued either an assistant should be paid by the corporation or that allowance should be made for the payment of one. Some of the samples received, such as corned beef, cooked beef, tinned salmon, chicken and veal, &c., are subjects for a skilled bacteriologist, as chemical analysis can do little beyond indicating the presence of preservatives or colouring matter.

Irish Food Factories.

In the annual report of the Chief Inspector of Factories and Workshops for 1905, which has just been published as a Blue-book, there are some startling disclosures relative to the conditions under which workers are employed and the manner in which food products are dealt with. It is reported how little attention is paid to cleanliness in the majority of food-producing places. The bottle-washing rooms, in which empty jam-pots from which it is desirable to remove the dirt and old labels are washed, are not only unsatisfactory from the point of view of the workers in them but would probably very disagreeably impress the customers. The jam, confectionery, biscuit, condensed milk, and margarine factories in Ireland present an alarming state of affairs. The personal cleanliness of the workers is animadverted upon and it is said the matter of cleanliness has received scant attention in many of the Irish factories. The statements made by the inspectors in this Blue-book with reference to the conditions under which work is carried on in Irish food factories are of a very startling and distressing character and they indicate a state of matters which should be remedied at once if the industries referred to in the report are to make any real progress. Altogether, the facts disclosed, if proved, are of a very damaging character and must be dealt with without any delay. The Chicago scare has probably drawn attention to the matter.

County Antrim Infirmary.

From the annual report of the County Antrim Infirmary, just issued, it appears that during the past year 338 intern and 509 extern patients were treated (an increase of 18 of the former and a decrease of 42 of the latter as compared with the previous year). There were 293 accident cases—217 extern and 76 in the hospital, and there were 118 operations. Financially there is a deficiency in the year's working, the expenditure having considerably exceeded the income. The annual expenditure on each patient for drugs and dressings was £4 17*s.* 7*d.* and for food £11 12*s.* 10*d.*

Post-Graduate Lectures in Belfast.

The course of post-graduate demonstrations and lectures given by the staff of the Royal Victoria Hospital began on July 16th and a large class is in attendance.

July 17th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Writing of Scholars.

AT a meeting of the Society of Public Medicine and Hygiene held on June 27th M. Desnoyers read a paper

upon the above-mentioned subject. He is strongly in favour of the sloped style of writing, holding that the upright style is only practised by primitive peoples who have but little writing to do. It has also been noticed that sufferers from writers' cramp generally employ the upright style. Two children were made to write before the meeting. They were stripped to the waist and although they wrote in the sloping style they kept the upper part of their bodies perfectly straight. M. Desnoyers wished that the authorities should instruct schoolmasters to train their scholars in writing so as to avoid the risks caused by the bad position of the scholar whilst writing. M. Javal, who some years ago published a book dealing with the question, did not think that upright writing produced all the evils which were attributed to it. In his opinion it was quite natural that a child who began to learn to write by copying should make his first letters upright. Later, when he was anxious to write more rapidly, he began to slope his writing. M. Desnoyers replied that he thought it better for a child not to learn two different kinds of writing but that he should begin as he meant to continue.

Mycetoma of the Dorsum of the Foot simulating Sarcoma.

At a meeting of the Surgical Society held on June 7th a paper was communicated by Dr. Braukt of Algiers on the following case. An Arab, aged 57 years, had a tumour on the dorsum of his foot. The growth was nearly of the size of the fist, its consistence, though it varied from time to time, was generally hard, and it was painless. The tumour was removed and microscopical examination showed that it was a mycetoma. The points of interest in the case were: (1) the circumscribed form of a tumour which is generally diffused; (2) the fact that it occurred on the dorsum of the foot, whereas mycetoma is almost always on the plantar aspect; and (3) the fact that the bones of the foot were quite unaffected, contrary to what is generally found.

Malposition of a United Fracture.

At a meeting of the Surgical Society held on July 4th M. Chaput read an account of a case in which there had been a fracture of both bones of the leg and the bones had united in a vicious position. Radiography showed that the fracture lay some two fingers' breadth above the lower interarticular line. The two fragments of the fibula formed an angle open outwardly, while the upper fragment of the tibia had slid over the internal aspect of the lower fragment. M. Chaput corrected the deformity by resecting from the tibia a conical fragment with its base internal and from the fibula a small cylinder of bone. After this reduction was easy and the patient recovered with a straight, useful limb. In the discussion which followed M. Chaput's treatment met with the approval of the meeting.

Saline Baths in the Treatment of Suppurative Tuberculous Arthritis.

At the same meeting of the same society M. Reynier showed a patient on whom he had performed resection of the elbow-joint for suppurative tuberculous arthritis with an open wound. Profuse secondary suppuration followed the operation and with the view of curing this M. Reynier employed saline baths and dressings soaked in saline water. Two arm baths were given per diem lasting for three hours each. Five or six litres of hot water were used containing from 50 to 60 grammes of mother liquor from Salies. On the conclusion of the bath the arm was dressed with compresses soaked in a similar solution. This treatment was rapidly successful and M. Reynier said that he could not recommend it too highly as an alternative to resection in those cases of suppurative tuberculous arthritis where there was an open wound. More especially would he use it in the case of the elbow-joint resection of which was a grave operation. M. Quénu took exception to this last remark and did not consider resection of the elbow-joint particularly serious. The post-operative suppuration was generally of a mild character and the results of the operation were excellent.

French Sanatorium Medical Officers.

There has just been founded at Paris a Society of the Medical Officers of French Sanatoriums. The object of the society is the scientific discussion of tuberculosis with special regard to the working of sanatoriums both public and private. The society, which consists of active members only, is open to all sanatorium medical officers, whether principal medical officers or assistants. The administrative body is a committee composed of five members, and the President is Dr. Calmette. Three meetings will be held per annum, two in Paris and the third at some provincial sanatorium.

The Academy of Medicine.

M. Ferdinand Widal was elected a titular member of the Academy of Medicine on July 3rd, in the section of Hygiene and of Legal Medicine, by 67 votes out of 76.

The Old School of Medicine.

In conformity with the report of M. Grébauval, the Municipal Council of Paris has decided to authorise the Prefect of the Seine to grant a 99 years lease to the General Association of Students of the building in the Rue de la Boucherie which was formerly occupied by the School of Medicine. A yearly rent of 3000 francs is to be paid by the association. The association also undertakes to restore those portions of the building which are of historical interest.

Compliments to Professor Pozzi.

On Sunday, July 8th, the friends of Professor Pozzi presented him with a medallion, a true work of art by Chaplain, and a special copy (*livre d'or*) of a book containing unpublished articles upon questions of surgical gynæcology. The ceremony took place in the theatre of the Pasteur annexe of the Broca Hospital. Dr. Debove, Dean of the Faculty of Medicine, presided and made the first speech. He was followed by Professor Renaut of Lyons, Dr. Dartigues, head of the clinique at the Broca Hospital, Dr. Javle, the secretary of the committee, and Dr. Monprofit. Professor Pozzi then rose, and having thanked M. Clémenceau, the Minister of the Interior, who was present at the ceremony, he reminded his audience of the fact that M. Clémenceau, who is a Doctor of Medicine, had himself obtained a gold medal from the faculty. He then referred to the history of the chair of gynæcology and conveyed his thanks to his pupils and all those who had been associated with him in the work of this chair. Dr. Debove then presented Professor Pozzi with the medallion amidst loud applause.

The Responsibility of the State for Hygienic Deficiencies in Government Offices.

The Conseil d'État has just given a most important judgment with regard to the responsibility of the State in the matter of hygiene. A post-office official who had arrived at Bastia in perfect health developed in a few years symptoms of tuberculosis and died in 1903 from tuberculous bronchitis. His widow demanded a pension. She was refused as her late husband had not reached the age limit necessary for a pension by law. The widow therefore appealed to the Conseil d'Etat, saying that her late husband had been placed in an unhealthy office where he was constantly in contact with a tuberculous clerk and that two clerks who had worked in the same office before him had both died from tuberculosis. She quoted the law which gives widows of those who die from grave accidents incurred in the performance of their duties a pension, and she argued that a disease arising from definite circumstances connected with abnormal conditions in the service should be considered as a serious accident. The Conseil d'Etat coincided in this view and the widow was awarded her pension.

July 17th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

"*Flagrantis atrox hora Canicule.*"

WE are nearing the dog-days. Sojourners from the British Isles—all, in fact, whose constitutions are built on northern lines—have hastened to put the Alps, or the "watershed," as the Americans call them, between themselves and the Italian sun. Not that there are not shady nooks at high altitudes even in Central Italy where the great heat may be avoided. The "Tuscan Switzerland," as that special chain, or rather network, of the Apennines is called, abounds in such places of refuge. Take, for example, Camaiore in the province of Lucca. "There," as a correspondent of British nationality tells me, "you are surrounded by quite imposing mountain peaks which, so near the Mediterranean, have as grand an appearance as the Swiss Alps. We can, and generally do, spend the whole day out of doors and feel greatly invigorated by the change. It seems impossible that we are only one and a half hours' drive from that Sahara Viareggio! It blows a keen, cool N.W. or S.W. wind every day from 9 A.M. till sunset, and the solar rays cannot

pierce the dense umbrage of the ilex trees on the grassy terrace. We are not nearly so high as at Barga (the Della Robbia country above Bagni di Lucca) and yet we are always cool—even cold at times—while at Barga, from its being shut in by mountain walls, the heat is often stifling. Looking through the screen of cypresses and across the valley I see a grey old church-tower whose silvery bells fall pleasantly on the ear at matins and at Ave Maria, as their tones come wafted from the mountain opposite—quite conducive to quiet work or 'studious musing,' till it is time to seek repose in the spacious dormitory with its windows all night wide open." All the same, while once in a way such a resort is for British subjects a delightful escape from the sultry lowlands, it is not bracing enough if repeated from year to year. Many an English-speaking family, after spending the summer annually at Vallombrosa, for instance, have found that something more than cool shade at 3000 feet above sea-level is required if you would avert premature breakdown. Climatic change is necessary for such constitutions—in proof of which we have the testimony of British residents in Italy who, summer after summer, have made their *villeggiatura* at Airolo on the Italian side of the St. Gothard tunnel and yet felt their vigour deteriorating till they bethought them of trying Göschenen, on the Swiss side, when they immediately felt they had "changed for the better." Meanwhile, the approach of the dog-days has inspired a stampede from all the chief Italian cities, especially from the capital and from its sultriest quarter, the Vatican, whence the *pezzi grossi* or leading functionaries, have already gone to seashore or hillside as a welcome escape from daily service in the Cappella del Coro, with its monotonous chanting, or from the various offices, open as they are for two or, at most, three hours per diem and not all the week through. The Cardinal Secretary of State starts for Castel Gandolfo, on the Alban hills, leaving the Holy Father to face the heat in the Apostolic Palace, some 2000 feet lower on the least healthy of Roman hills. His Holiness continues to give audiences, but to very few at a time, his health, though somewhat improved, indicating need of rest and relaxation from official cares. He has resumed his daily promenades in the Vatican demesne but while in the first few months of his pontificate he would take long walks on foot in the well-shaded alleys he has now to resort to his carriage, whence he alights for a little to converse with the more intimate of his suite but returns to it not unwillingly after covering a few hundred yards. "Happy you," he said the other day, "who can go where you like. Go, go, and get as well as possible. When you come back you will certainly find me here."

"*L'Insidie alla Vita*."

"Life's Enemies in Ambuscade," as the above may be rendered, is the title of a very scientific, very attractively written, and very opportune volume, addressed to Italian heads of families and to the educated people of Italy in general. Its lady writer is Dr. Teresita Ruata, assistant to the professor of materia medica in the University of Perugia, on whose medical staff her father has long held a distinguished position, apart from his extra-professorial work in literature, particularly on public health. Miss Ruata sums up the most recent and most scientifically accredited findings of pathological and clinical medicine and brings them home to the appreciation of the lay reader with a clearness of exposition and occasionally with a dramatic force that never fail to satisfy and to sustain the interest which it evokes. Italian literature comprises no better account in such brief space of, for instance, the "opera benefica" of Lord Lister or of the prophylaxis or treatment (if not of the etiology) of malaria associated with the names of Manson and Ross. After the "insidie" of life Miss Ruata proceeds to enumerate the processes and the means of "alimentazione" and illustrates the disastrous results of their systematic or even occasional infringement by such retributive visitations as, for instance, pellagra, on which she gives succinct but quite sufficient and impressive information. The book,[1] with its pictorial illustrations as a help to the letterpress, is not bulky and well deserves perusal on the part of English-speaking residents in Italy, for whom it has recommendations and warnings hardly less opportune than for the Italian public to whom it is primarily addressed.

July 15th.

[1] Dott. Teresita Ruata: Insidie alla Vita, one vol., pp. viii.–224. Torino: Unione Tipografico-Editrice, 1906.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Prevention of Cholera.

THE Public Health Department has now published in book form a collection of decrees and regulations which have been issued during the last ten years as a useful guide to those in charge of measures which will be taken against the spread of any future outbreak of cholera. It is hoped that the book will be carefully studied by all public health inspectors in the country districts, so that they may be aware what measures can be taken promptly and without confusion. It is, of course, not intended to discourage initiative but rather to point out the lines upon which previous experience has shown that the most satisfactory results can be obtained. The great success which Egypt has attained in the stamping out of epidemics of both cholera and plague during recent years is due to the fact that when the country is declared to be infected stringent laws at once come into force which could not be submitted to in normal circumstances. For instance, in large towns when cholera has been declared all fairs are prohibited, insanitary dwellings are whitewashed inside (the Egyptian, unless controlled, prefers to whitewash the outside only of the house), street sweepings are burned outside the town instead of being preserved for heating the public baths, medicines for diarrhœa are distributed free, cesspools are emptied and disinfected, while the latrines of mosques or other buildings which are considered dangerous to public health may be closed, and a portion of the cemetery is chosen for the burial of those who have died from cholera and is used exclusively for this purpose. But the most important regulation refers to the prevention of pollution of the water-supply; local regulations regarding the mooring of boats, drawing of water, washing of clothes, and watering of animals must be strictly enforced by the police, while frequent inspections must be made and special attention paid to mineral water and beer factories. Stables and cowsheds in an insanitary condition may be temporarily closed if they are considered dangerous to public health. In order to encourage the drinking of pure water standpipes should be erected in various parts of any town which possesses a water-supply laid on by pipes, while arrangements should be made with the water companies to keep their workmen on the premises, they should not be allowed to walk about the town, and should be inspected daily by a responsible person before going to their work. Every water-carrier should be obliged to bring his goat-skins or water-cart to be disinfected, the former by 2 per cent. sulphuric acid and the latter by steam; every skin and cart should be stamped after disinfection and no one should be allowed to fill a skin or cart at the stand-pipes unless it bears the Government stamp. All schools may be closed, as also public baths, drinking fountains, and the ablution tanks of mosques. The various regulations are drawn up in a simple and practical way and are supposed to be carried out by the local sanitary commission, but it is needless to say that all success will depend upon the constant presence of the English inspectors of public health. Great stress is laid upon the importance of early recognition of the disease and the headmen of villages are to be informed that suspicious cases of sickness should be at once removed to some temporary shelter outside the village without waiting for the arrival of the public health officials. This is almost too much to expect from sheikhs who cannot see the importance of keeping their water-supply free from the contamination of human excrement, but in another generation education will work wonders. It is quite a mistake to suppose that any Egyptian prefers to drink polluted water, though he is quite content to do so if no pure supply is at hand. In order to obtain specimens for bacteriological examination, which is all-important in the early diagnosis of imported cholera, boxes containing a corked test tube with wire and cotton-wool are supplied by the Central Administration and as it often happens that the earliest cases of cholera are not seen until after death the sterilised cotton-wool should be introduced into the rectum of the suspicious case, and after having been allowed to absorb sufficient discharge it should be placed in the sterilised test-tube and forwarded immediately to the Government bacteriologist. Necropsies are only permitted in very exceptional cases. Among

personal precautions the officials are warned to pay special attention to the necessity of carrying a supply of boiled drinking-water for themselves and to be provided with a solution of corrosive sublimate for washing their hands. It is difficult to over-estimate the importance of isolating the sick when undoubted cases of cholera have occurred. The patient, if alive, should be removed to hospital while his house and all people who have been in contact with him must be disinfected, while if the patient is already dead his body must be washed with corrosive sublimate and buried in the special quarter of the cemetery in a shroud soaked in sublimate solution. Cases are allowed to be treated in their own houses provided isolation can be efficiently maintained. Special instructions are issued with regard to the disinfection of clothing, drinking vessels, and wells, and rules for nurses, railway officials, and river police are laid down.

Bacteriological Report from the Tor Quarantine Camp.

Dr. F. Gotschlich has now issued his annual report which confirms last year's report in one interesting way. As in 1905, there was a complete absence of cholera among the pilgrims returning from the Holy Places, but again in two cases the comma bacillus was found. He examined the fæces of 127 pilgrims in hospital for various kinds of disease and in 18 vibrios were found, always from cases of dysentery or colitis and never in a single instance from an individual whose intestines were normal. Only two of the 18 cases, however, gave a specific reaction with cholera serum obtained from Berlin at a dilution of 1 in 2000; the other 16 cases gave no reaction at all, even with a dilution so strong as 1 in 50. This year's bacillus also gave a perfect serum reaction with those found at Tor last year. The two suspicious pilgrims came from Asia and were neither of them natives of Egypt. It has long been known that various epidemics of cholera have been associated with comma bacilli which do not correspond in every detail with Koch's bacillus, and it is evident, as Metchnikoff has stated, that the cholera vibrio is one of the most pleomorphic of all organisms. Dr. Crendiropoulo, the director of the quarantine laboratory in Alexandria, has just published an interesting report on the subject of the differential diagnosis of vibrios. He concludes by expressing his belief that in order to classify a vibrio every biological test must be applied, for agglutination and Pfeiffer's reaction by themselves are not enough for identification. His paper is based on the examination of 42 cases, mostly choleraic or dysenteric, obtained from India, Egypt, and Europe. Only 18 of the 42 bacilli were agglutinated by an undoubted cholera serum. Dr. Zirolia, director of the quarantine laboratory at Port Said, has also reported on six vibrios isolated from the water-supply of ships. He examined altogether 384 samples and found vibrios in water from 82 ships but in only six was there a positive agglutination with the Berlin cholera serum. All these six vibrios were pathogenic to guinea-pigs but not to pigeons. These workers have been greatly stimulated by the encouragement of their chief, Dr. M. Armand Ruffer.

July 12th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Death of Dr. Mary Putnam Jacobi.

THE profession of medicine in this country has lost a prominent member in Dr. Mary Putnam Jacobi whose death has just been announced. The late Mary Putnam was born in London, England, on August 31st, 1842, and was a daughter of George P. Putnam, a well-known New York publisher. She studied medicine at the Woman's College, Philadelphia, the New York College of Pharmacy, and the École de Médecine in Paris where she had the honour of being the first woman admitted to medical classes. She graduated in Paris in 1871 and in 1873 married Dr. Abraham Jacobi, the distinguished New York physician. She was the first woman member of the New York Academy of Medicine and served for 12 years as a dispensary physician to Mount Sinai Hospital. For ten years she was a professor in the Woman's Medical College, and subsequently for three years a professor in the New York Post-Graduate School of Medicine. Her essay on "The Question of Rest for Women during Menstruation" won the Boylston prize at Harvard University, Boston, Massachusetts. She was, indeed, an author of recognised ability and some of her works were: "The Value of Life," "Cold Pack and Massage in Anæmia," "Hysteria," "Brain Tumours," "Studies in Primary Education," and "Common Sense Applied to Woman Suffrage." These and multiple essays and articles in the medical and lay press made her an author of more than national repute.

Yellow Fever.

Several cases of yellow fever are reported at Ship Island, the quarantine station of the coast of Mississippi in the Gulf of Mexico. They were on the s.s. *Whitehall*, from Colon, isthmus of Panama. The steamer had taken a cargo of lumber there. Colon is a foul and pestilential spot. Yellow fever has been endemic there for many decades. The news regarding these cases developed as the result of an inquiry by President Irion, of the State Board of Health, Louisiana, sent recently to Dr. Hunter, State health officer of Mississippi. In reply to President Irion Dr. Hunter said that he had no knowledge of any cases but would make due inquiry. Later he telegraphed to President Irion as already set forth. It is known here that several cases of yellow fever have occurred in that ancient hot-bed of the disease, the city of Havana. The results of the reports made by the commission sent by the *New York Herald* to Cuba, 1904 and 1905, have been the very unusual and energetic action in cleaning the city of Havana, with its foul *patios*, or court yards. With an increase of high summer temperature in the Southern United States the student of yellow fever will expect new cases, or the usual echo after a year of an epidemic such as visited New Orleans and its vicinity last year.

The Insurance Scandals.

Dr. Walter R. Gillette, a former medical director of the Mutual Life Insurance Company of this city, and until recently one of its vice-presidents, has just been indicted by the Grand Jury. Six counts were alleged against him for perjury and forgery. He will be tried in September next with his fellow vice-president, Mr. Robert A. Granniss. Dr. Gillette is a Fellow of the New York Academy of Medicine and physician to several hospitals.

July 10th.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Board of Scientific Advice.

THE Board of Scientific Advice, established in 1902 under the enlightened rule of Lord Curzon, has already attained considerable reputation for scientific investigations. Its reports are communicated to the Royal Society, which by an advisory committee furnishes the board (here in India) and the Government with suggestions. A recommendation is made to the Government of India to increase the superior staff of the Geological Department partly for the purpose of additional surveys and partly for economic investigations. Another line of investigation is in the botanical exploration of areas not yet investigated, and more especially for providing separate floras of the various provinces. The board further recommends that the physiological investigations into the nature and cause of lathyrism should be continued. Other investigations contemplated refer to the movements of glaciers, the discharge of silt from Indian rivers, experiments for the improvement of cotton, and experiments in growing flax.

Opportunities for Medical Research.

Some very admirable suggestions for facilitating research works have recently been put forward by the sanitary commissioner with the Government of India, but unfortunately the Government puts difficulties in the way of officers willing to take advantage of the laboratories either for instruction or for original investigations. Colonel Leslie refers to the want of officers sufficiently skilled to carry out investigations regarding malaria, kala-azar, Delhi boil, and more particularly dysentery and suggests that a limited number should be deputed to the laboratories. The Government accepts the proposals for certain officers of the Indian Medical Service, but the application of an officer has first to be backed by the sanitary commissioner, then it has to be submitted to the Director-General, and then to the local government (to decide when the officer in question can be

spared from his ordinary duties). No deputation allowance will be given and the officer will lose any allowances which he receives for local duties. This is poor encouragement to individual officers and the further pronouncement of Government that no addition to the sanctioned strength of the Indian Medical Service is contemplated on account of officers studying at a laboratory shows the indifference which exists to the higher study of Indian diseases. This is short-sighted policy and Indian civilians have yet to learn that it is only by scientific medical research that even the expenses of jails, asylums, and other public institutions will be reduced, to say nothing of the lessened mortality and the better treatment of disease.

The Plague Epidemic.

The plague epidemic has subsided to such comparatively small proportions that the mortality excites but little interest. Only 7660 deaths were recorded for the whole of India during the week ending May 26th. In Eastern Persia, however, the disease continues and shows no sign of abatement and the announcement has this week been made that Jeddah is an infected port and that the plague regulations will be enforced against vessels arriving from that port. Statistics covering the period since plague was first reported in 1896 give the following yearly records of mortality.

1896	...	...	1,704 deaths.	1901	...	...	273,679 deaths.
1897	...	...	56,055 ,,	1902	...	...	577,427 ,,
1898	...	...	118,053 ,,	1903	...	...	851,263 ,,
1899	...	...	133,789 ,,	1904	...	...	1,022,299 ,,
1900	...	...	93,150 ,,	1905	...	...	960,863 ,,

In the present year about 170,000 deaths have been recorded up to the end of April, which gives a grand total of 3,729,000 since 1896. Even this is under the mark, and probably 5,000,000 would more correctly be the death roll. An experiment of considerable importance has recently been made to the effect that the ordinary disinfection by acid perchloride of mercury is ineffective against the rat flea. Even a 1 in 500 solution fails to kill fleas except after prolonged immersion, but izal and analogous bodies are successful after short periods.

The Strike of Students at Lahore.

The strike of the Lahore medical students still continues and they have apparently had no reply to their representations. Some 35 out of 260 have returned to the college and have been readmitted. The latest move was a large public meeting, at which an executive committee was appointed for the purpose of laying their grievances before the Lieutenant-Governor. Their chief complaint seems to be against the menial work that they were compelled to do which they considered unnecessary and degrading. Their feelings have been hurt by their repeated representations on this and other matters not being attended to.

The Jails in Bengal.

The report on the jails of Bengal for the past year shows the average prison population of the province to have been 14,934. These were quartered in 35 principal jails and 67 subsidiary jails. The death-rate rose to 25·3 per 1000 from 19·5 of the previous year, which was the lowest on record. For 1904 the rate at Balasore was over 40 per 1000, but this year under a new superintendent it has fallen to 22·6. In four jails this year, however, the rate is over 40 per 1000: Burdwan at 43·3, due partly to floods which invaded the compound but chiefly to overcrowding; Purulia at 46·6 per 1000 where the main barracks are radically defective; Midnapore at 45 per 1000, which is always above the average; at this jail the prisoners are said to be always admitted in bad health, but serious defects in the barracks exist; and Charbassa, at 44·1 per 1000, but which has only a small prison population. The report shows the great prevalence of pulmonary tuberculosis in the province and the Inspector-General suggests utilising Berhampore jail for cases of pulmonary tuberculosis only. Overcrowding is reported in 16 jails. There seems to be great discontent among the warders as 1280 punishments were inflicted on them and 82 resigned. Deficient pay and illiberal rules regarding sick leave are the chief complaints.

The Water Scare in Calcutta.

The water scare in Calcutta has not been allayed by subsequent inspections of the three town reservoirs. Cracks in the masonry have been observed in all of them and percolation of subsoil and probably other foul waters is certain. The ensuing monsoon will test the matter more severely but it cannot be denied that at the present moment the water-supply of the whole city is liable to serious contamination. Like most places in India Madras has its difficulties and dangers in regard to the filtration of water. A new scheme is under discussion which is estimated to cost 35 lakhs, towards which the Government will assist with 14 lakhs. The balance will have to be met unfortunately by increasing the water tax and drainage tax to the maximum.

June 9th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Plague.

A FRESH case of bubonic plague has been reported from Subiaco, a suburb of Perth, West Australia. The man was working in the centre of Perth. In Sydney no further cases have occurred. About 2300 rats are killed weekly and of these some 800 are carefully examined at the Board of Health laboratories. Since April 18th only one rat has been found to be infected with plague. It was taken in the block of buildings in Clarence- and Kent-streets, where the last cases of plague in the human subject occurred. A thorough search in the vicinity of the premises in Alexandria, where a patient who died from plague had lived, showed that the rats had fled—only a very few were caught and none was plague-infected. Some of the properties, however, were in an insanitary condition. Dr. J. Ashburton Thompson, President of the Board of Health of New South Wales, has received an invitation from the American Medical Association to visit Boston and to deliver an address on Plague. He is unable to attend but has forwarded an address. Dr. Thompson has always taken the view, based on the observations and experiments made in Sydney, that fleas were essential to the communication of plague from rats to man, a view confirmed by the Indian commission's experiments.

Report of the Board of Health of Victoria.

A rather belated document has been published by the Board of Health of Victoria. It is a report for seven years up to December, 1904. It is almost entirely statistical. It is stated that the need for federal action in connexion with quarantine and the prevention of the introduction of exotic disease has been frequently illustrated during the period under review, but nothing has been done except the holding of a conference in 1903 of representatives of the health authorities of the several States. A report was drawn up but no action was taken. The striking immunity which Victoria has had from plague is ascribed to the preventive measures adopted by the Board and the loyal coöperation of municipal and shipping authorities. The urgent need for extending activities in preventing tuberculosis is affirmed, especially by extensive improvements in the sanitary conditions of the poorer classes.

Pure Food.

Under the Pure Food Act of Victoria the Board of Health is empowered to make regulations for "securing the cleanliness, freedom from contamination, and adulteration of any article of food or drug, or other article, substance, or compound; and for securing the cleanliness of receptacles, places, and vehicles used for the manufacture, preparation, storage, packing, carriage, or delivery of any article of food or drug, or other article, substance, or compound." The following regulations have been made:—

1. No person who sells bread or meat, and no employé of such person, shall receive into any place or vehicle for the reception or storage of bread or meat for sale any bread or meat which has been returned after delivery at any house. 2. No person who sells bread or meat shall use or cause to be used as a material for casing, covering, enclosing, or packing bread or meat for carriage or for sale any second-hand paper or any newspaper, or part of a newspaper, or any paper or substance on which there is printing which can come into contact with the bread or meat.

And with regard to milk, cream, butter, cheese, cooked meats, bread, pastry, confectionery, honey, jam, and other articles of food to which flies are attracted and which are ordinarily consumed in the condition in which they are purchased—

1. Any person who sells on any retail premises (including cafés, restaurants, and licensed premises) any of the above-named articles of food in other than sealed packages shall, as far as practicable,

protect such articles of food from dust and flies by storage in covered receptacles, or by means of metal covers, or wire gauze screens, or other effectual appliance. 2. No person shall transport through the street for sale any of the above-named articles of food, unless the same is properly protected from dust and flies. 3. Any person using any vehicle for the storage or exposure for sale in the street of any fruit shall, unless the fruit is otherwise adequately protected from dust, provide and fit to such vehicle close-fitting screens on every side except that from which the fruit is removed for sale.

The use of preservatives in food has also engaged the attention of the Board which desires to place the public in a position to know where they stand in regard to the articles of food which they consume. As the application of scientific methods of manufacture becomes more general, it is regarded as indubitable that the use of foreign preservatives will be reduced to a minimum. In the meantime, however, the Board has found it advisable to frame the following regulations, which it is proposed shall be enforced on and after Dec. 31st the penalty for infraction being £10:—

1. To every article of food mixed with a preservative substance, and to every article of food mixed with any foreign colouring matter, or to any wrapper or receptacle containing any such article so mixed, there shall be attached a label distinctly and legibly written or printed and setting forth (*a*) the nature and amount of such preservative substance; and (*b*) the nature of any foreign colouring matter mixed with such article of food. This regulation shall not apply to confectionery nor to the long-used, well-known condimental preservative substances—viz., common salt, sugar (sucrose or saccharose), spices, wood-smoke, and vinegar; nor, as regards wine, to the substances allowed under Section 25 of the Pure Food Act, 1905.

Provision is also made for the attachment of a label setting forth in a legible manner the quantity of preservative contained in every pound or pint of the article of food sold. It is further provided that the word 'pure" must not be used to describe on the label any article of food not true to name, of standard composition, strength, purity, or quality, or which is mixed with any foreign substance.

Lunacy Reform in Victoria.

The Victorian Ministry has been considering the recommendations of the Inspector-General of the Insane, Dr. Jones, for improving the asylums. It has been decided to build a hospital for acute cases in the metropolitan district, providing for 125 patients, with a special staff. It is estimated to cost £30,000 to build. It was resolved to spend £8000 on reception houses at Ballarat, Warrnambool, and Sale, and in renovating the existing receiving house at Bendigo. All the existing county asylums are to be renovated. The present staff of untrained temporary attendants in the various asylums is to be replaced by a permanent trained staff who will begin as probationers. It was not finally decided whether any amending legislation should be introduced or what should be done with the new asylum.

Treatment of Inebriates.

The Chief Secretary of New South Wales has received a report from the Inspector-General of Charities and the Director of Labour as to the suitability of Rabbit and Milson Islands for the establishment of inebriates' homes. As has been previously mentioned, buildings for the purpose, costing £13,000, have been erected on Rabbit Island but not used. The report states that the islands form ideal situations for the proposed institutions and the land could be utilised for agricultural purposes, though the area on Rabbit Island is very small. It is considered impracticable to have two classes of patients, one paying and the other not.

Treatment of Epileptics.

The council of the epileptic colony in Victoria has had great difficulty in securing a suitable site, but the difficulty has been settled by the gift of some property at Clayton by Mr. J. Mason. It consists of 174 acres of particularly good land and the situation is regarded as very suitable.

Prevention of Tuberculosis.

A large and representative deputation waited on the Chief Secretary of New South Wales on May 23rd to urge that further precautions should be taken to prevent the spread of pulmonary tuberculosis. It was desired that notification should be enforced and more accommodation provided for patients in the advanced stages of the disease. The Minister gave a sympathetic reply and said that the matter would be considered by the Cabinet.

Sight and Hearing Tests on the Railways.

In accordance with the decisions of the Inter-State Conference of Railway Commissioners, held some time ago, new scientific tests for sight and hearing, uniform in standard, have been adopted in the railway service of the different States and the various employees have undergone examination by experts. In New South Wales the result has been that many men (30 per cent.) could not pass the tests and it was said that some of the best men were in consequence degraded and hardly treated. A deputation of 30 Members of Parliament waited on the Premier on May 17th to ask him to urge on the Commissioners the necessity of reverting to the old system of practical tests instead of Holmgren wools, acoumeters, and test-types. The Premier replied that he could not control the Commissioners but would place the views of the deputation before them. Subsequently, on May 28th, delegates from the Amalgamated Railway and Tramway Service Association interviewed the Railway Commissioners and asked for the abolition of the acoumeter test and the wool test; a modification of the card test; a proviso to the lantern test to enable an employee to appeal for a practical test; that sight and hearing tests should only apply to those connected with the safe working of trains; and that those who had already failed should have an opportunity of being re-tested under the modified conditions proposed by the association if adopted. Instances were given of a man who was absolutely colour blind being able to pass a wool test, and of another being able to pass a colour test without having any sense of comparison in the matching of the shades of a colour. The Commissioners agreed to abolish the acoumeter test and stated that orders would be given to substitute the voice test. They agreed, too, that sight and hearing tests should only apply to those connected with the safe working of trains, or to those likely to be promoted to positions connected with safe working. They also said that if modifications were decided upon opportunities would be given, on appeal, for re-testing under the modifications. The other proposals will receive consideration.

June 3rd.

Medical News.

UNIVERSITY OF LONDON.—At examinations held recently the following candidates were successful:—

M.S.—Thomas Percy Legg, King's College and St. Bartholomew's Hospital; William Paynter Noall, Royal Infirmary, Manchester, and London Hospital; and William Gordon Taylor, B.Sc., Middlesex Hospital.

D.Sc. Alfred Walter Sykes, M.D., B.S., St. Thomas's Hospital, University of Marburg, and Laboratories of Examination Hall and Queen Charlotte's Hospital.

UNIVERSITY OF BIRMINGHAM: FACULTY OF MEDICINE.—The following is a list of the successful candidates at examinations held in June:—

I. Degree of Doctor of Medicine.—Thomas Webb Fowler, Robert Beatson Dennis Hird, and Alfred Ernest Remmett Weaver.

II. Degree of Master of Surgery.—(*a*) Official: Frank Marsh. (*b*) Under Ordinary Regulations: Class I.: Alex. Wathen Nuthall.

III. Degrees of Bachelor of Medicine and Bachelor of Surgery.—(*a*) Past Students of Birmingham Medical School.—Class II.: Frank Newsteat Deakin and Charles Henry Maskew. (*b*) Under Ordinary Regulations.—Class II.: Reginald Hudson Astbury, John Staines Austin, Arthur Cecil Hincks, Claude Johnson, Harold Bruce Jones, and Walter Rowland Southall Roberts.

IV. Fourth Examination for the Degrees of M.B., Ch.B.—Class I.: James Fenton, Arthur Addison Sanders, and Francis Brett Young. Class II.: Edward James Boome, Henry Neville Crowe, Eric Thomas Gaunt, John Kennedy Gaunt, Philip James Mason, Nevill Coghill Penrose, Arthur John Smith, Rupert Wesley Thompson, and Norman Valentine Williams.

V. Third Examination for the Degrees of M.B., Ch.B.—Part I.: Pathology and Bacteriology.—Class II.: John Adams, Charlotte Bailey, John Dale, George Henry Chavasse Mold, David Priestley Smith, and Edward Vernon Whitby. *Part II.: Materia Medica and Pharmacy.*—Class I.: John Adams, John Dale, Harvey Atkins Evans, and Edward Vernon Whitby. Class II.: Charlotte Bailey.

VI. Second Examination for the Degrees of M.B., Ch.B.—Class II.: Walter Charles Blackham, Norman Alexander Boswell, Harold Gordon Browning, Humphrey Francis Humphreys, Violet Maud McCready, Cranston Walker, and Kenneth Douglas Wilkinson. Passed in part of the examination: James Henry Bampton (anatomy and comparative anatomy), John Selwyn Edwards (anatomy and physiology), Carl Euclid Molino (anatomy and physiology), Ethel Annie Waldron (anatomy and physiology), Harold Arthur Whitcombe (anatomy and physiology), and Henry Wilks (anatomy and comparative anatomy).

VII. First Examination for the Degrees of M.B., Ch.B.—Class II.: Eric Walter Asslnder, Oscar Madeley Holden Elizabeth Stephens Imrey, Lionel Gilbert Jordan, Ronald Douglas Nelson, and Henry Richmond.

VIII. Degree of Bachelor of Dental Surgery.—Class I.: William Bowater.

UNIVERSITY OF LEEDS.—At a Congregation of the University which was held at the medical school buildings on July 13th Professor Smithells, as Pro-Vice-Chancellor, conferred the degrees of Bachelor of Medicine and Bachelor of Surgery on the following candidates who had passed the recent examination:—

F. G. Dobson, E. R. Flint, S. R. Gloyne, J. J. Hummel, and F. E. Kendall.

The following pass lists are issued:—

Second M.B. and Ch.B. Examination.—Part I.: W. H. Brown and J. B. T. Keswick. Part II.: C. S. Brown, J. P. Musson, A. Riley, C. G. K. Sharpe, W. Shaw, R. E. Smith, and J. N. L. Thoseby.
Final M.B. and Ch.B. Examination.—Part I.: W. L. Dibb.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following prizes were awarded for the summer session. Barker anatomical prize (£31 10s.): P. G. M. Elveryr Carmichael scholarship (£15): C. Greer. Gold and silve, medals in operative surgery: gold, D. Adams; silver: R. M. Bronte. Stoney memorial gold medal in anatomy. G. S. Levis. Practical histology: R. Adams, fir-t prize (£2) and medal; and O. W. J. Wynne, second prize (£1) and certificate. Practical chemistry: J. J. Lyons and P. I. Wigeder (equal), first prize (£2) and medal. Public health and forensic medicine: T. C. Boyd and C. T. Cullimore (equal), first prize (£2) and medal. Materia medica: J. J. Lyons, first prize (£4) and medal; and H. W. White, second prize (£1) and certificate. Biology: H. D. Gasteen, first prize (£2) and medal; and J. S. Pegum, second prize (£1) and certificate. The lectures of the winter session will commence on Monday, Oct. 15th.—The Barker Anatomical Prize for 1907, of the value of £21, is offered for competition and is open to any student whose name is on the anatomical class list of any school in the United Kingdom. The preparations entered must be placed in charge of the curator on or before April 30th, 1907. The prize is offered for a dissection showing the viscera in relation with the abdominal surface of the diaphragm. The relations of the common bile-duct, which should be seen opened up along its entire length, are to be retained fully. The conditions under which the competition is to be carried out are as follows:—1. The preparation must be sent to the Curator of the Museum of the Royal College of Surgeons in Ireland, each being marked with a fictitious signature and accompanied by a sealed envelope bearing outside the same signature, and containing within, (*a*) the full name of the competitor, and (*b*) a declaration to the effect that the work of the preparation has been carried out by himself. The printed form necessary for this declaration can be obtained on application to the Curator. 2. The dissections are to be mounted in vessels fitted with glass covers, but the covers must not be sealed down. Earthenware basins and plaster-of-Paris settings are not compulsory if the specimens can be better displayed and preserved by other means. 3. No prize will be awarded unless sufficient merit be shown, 70 per cent. of the total marks being the minimum. The following is the scale of marks: (*a*) for the merit of dissection, 60; (*b*) for excellence of setting, 20; and (*c*) for originality, 20—total, 100. Those dissections for which prizes are awarded become the property of the College. 4. Those competitors who enter dissections for which prizes are not awarded but which show sufficient merit may be refunded such amount of the cost of production as the examiners deem fit. 5. The cost and risks of transport must be borne by the student. The College will not be responsible for any damage the preparations may sustain, but those of unsuccessful competitors residing at a distance will be carefully repacked and handed to the carriers for delivery at such address as may be specified by the student.

A CONGRESS OF CHILD STUDY.—A congress will be held in Berlin from Oct. 1st–4th under the presidency of Professor W. Münch for the purpose of discussing child study and matters connected with the care of children. In the mornings of each of the four days addresses will be given to the whole congress by selected lecturers. The afternoons will be devoted to the meetings of sections, of which the first deals with anthropology and psychology, the second with psychology and pedagogy, and the third with social and philanthropic endeavour. Among the subjects for discussion the following may be mentioned: the scientific examination of the capacity of children; the association of ideas in normal and defective children; the care of children just released from school attendance; the importance of open-air instruction in mathematics and natural science; sleep among the public school population of Berlin; and the importance of manual training in the education of defective children. An exhibition of materials which have been collected to form the nucleus of a German museum of education and child study will also be held. The exhibits deal with physical instruction, the hygiene of normal and defective children, teaching materials, school buildings, and equipment. A series of drawings by young pupils will also be shown. The contribution of five marks constitutes membership and entitles the member to attend all lectures and to a report of the proceedings. The secretary of the congress is Professor Moritz Schäfer, Berlin, N.W., Klopstockstrasse 24, from whom detailed programmes can be obtained.

UNIVERSITY OF LIVERPOOL: DEGREE CEREMONY.—The ceremony of conferring honorary and other degrees in connexion with the University of Liverpool took place on July 10th at St. George's Hall. The Chancellor (the Earl of Derby, K.G.) presided and amongst others present were the Lord Bishop of Liverpool, the Right Hon. Charles Booth, Mr. E. K. Muspratt (Pro-Chancellor), Principal A. W. W. Dale (Vice-Chancellor), the professors and staff of the University, and several mayors of surrounding boroughs. Dr. Peace, the city organist, contributed selections on the organ during the assembly of visitors and students. The Chancellor, in his address, alluded to the continued prosperity of the University and said that it was his agreeable duty to confer the degree of LL.D., *honoris causâ*, upon the Right Hon. Charles Booth, P.C., F.R.S., D.Sc., D.C.L. The recipient was one whose life had been spent for the benefit of mankind. Professor Gonner, in presenting Mr. Booth, alluded to the great work accomplished by him in dealing with social and economic questions in London, in the organisation of dock labour, in the Poor-law, and in old age pensions. The Chancellor then formally admitted Mr. Booth amid cheers. Mr. Booth made a suitable acknowledgment of the honour conferred upon him. William Savile Henderson and Frederick P. Wilson, graduates of the Victoria University of Manchester, were admitted to the degree of Doctor of Medicine in the University of Liverpool. David Moore Alexander, James Leonard Hawkes, Gerald Joseph Keane, Robert Edward Knowles, Richard Howard Mole, and Herbert Francis Wolfenden were admitted to the degree of Doctor of Medicine. Wilson Bell, Charles William Budden, and Charles Owen Jones, graduates of the Victoria University of Manchester, were admitted to the degrees of Bachelor of Medicine and Surgery in the University of Liverpool. Frederick Thomas Alexander Lovegrove was admitted to similar degrees (*in absentiâ*). Upon the subject of the Students' Union an appeal was made last year which brought in £8000. A site had been provided in Ashton-street by the council and plans were under consideration and the architect had been appointed. Although £8000 had been assured £5000 were still wanted. The importance of such institutions was now recognised by all the younger universities.

PRESENTATION TO A MEDICAL PRACTITIONER.—Mr. John Mortimer, M.B. Lond., M.R.C.S.Eng., the honorary consulting physician to the Exeter Dental Hospital, has been presented with three pieces of silver plate by the dental staff and board of management of that institution on the occasion of his marriage.

NATIONAL SOCIETY FOR EMPLOYMENT OF EPILEPTICS: THE COLONY, CHALFONT ST. PETER.—The thirteenth annual meeting of the governors of this society was held on July 16th at the London offices, Denison House, Westminster. The chair was taken by Mr. E. Montefiore Micholls and the reports of the honorary medical staff and the executive committee for the year 1905 were received and adopted. From the latter report it appears that the extensions of the Chalfont colony and the consequent increase in the number of colonists have necessitated the purchase of 150 acres of additional land at a cost of £5500, the total area of the colony being now 360 acres. The executive committee states that the considerable recent extensions in the colony buildings have not kept pace with the increase in the number of applications, the result being that all candidates, and especially the female candidates, have to wait a long time for admission. In view of the importance in epilepsy of providing the patient with early treatment it is a source of considerable anxiety to the committee to

know that unless additional accommodation is speedily provided the period of waiting for female candidates may extend over several years. The report of the honorary medical staff states that the general health of the colonists throughout the year was very good and that there was an entire freedom from any epidemic or contagious disease, and in this report also attention is called to the need for greater accommodation. The colony at present has accommodation for 198 patients, a figure which represents probably less than 0·5 per cent. of the epileptic cases in the country that would be suitable for reception in a colony.

ST. MARY'S HOSPITAL.—The annual distribution of prizes to the students of the medical school took place at St. Mary's Hospital, London, on July 16th in the presence of a large number of visitors. The Dean (Dr. H. A. Caley), in the course of his report, said that the examination results for the year had been satisfactory: 25 students had obtained diplomas of M.R.C.S. and L.R.C.P. and 18 the M.B. degree of the Universities of Oxford, Cambridge, London, or Durham. He also added that St. Mary's was represented by 148 former students in the services—64 in the Royal Army Medical Corps, 48 in the Indian Medical Service, and 36 in the medical service of the Royal Navy. Surgeon-General Sir Alfred H. Keogh, K.C.B., Director-General of the Army Medical Service, presented the prizes and congratulated the school on being so well represented in the public services, especially in that branch to which he had the honour to belong. Sir Alfred Keogh afterwards unveiled a bronze mural tablet in memory of seven members of the hospital and medical school who fell in the South African war. The memorial bears the following inscription:—

To the memory of the members of St. Mary's Hospital who lost their lives while serving in South Africa.—Arthur Baird Douglas, Lieutenant-Colonel 3rd Battalion Sherwood Foresters (Derbyshire Regiment); Robert H. E. G. Holt, Captain, R.A.M.C.; George William Guy Jones, Lieutenant, R.A.M.C.; George Unlacke Jameson, Second Lieutenant 1st Battalion the Border Regiment; Cecil Courtenay Parsons, Civil Surgeon; Reginald Percy Fort, Civil Surgeon; Edith Manley Gardener, Sister Army Nursing Service.

The tablet is placed in the entrance hall of the Clarence wing of the hospital.

DONATIONS AND BEQUESTS.—Under the will of the late Mr. Charles H. Cowell of Ipswich the East Suffolk Hospital will receive £500.—The Walsall Cottage Hospital, the Birmingham General Hospital, and the West Bromwich District Hospital will each receive £1000 by the will of the late Mr. Frederick Birch of Birmingham.—The late Mr. Frank Bailey of Tilgate, Crawley, and Mark-lane, City, after bequeathing certain legacies to relatives and friends, has left the residue of his estate to his wife for life, with remainder as she may appoint, and in default of such appointment he has bequeathed certain of his property, estimated to be worth £80,000, to King Edward's Hospital Fund for London.—The following bequests have been made under the will of the late Mr. Francis W. Webb of London: £10,000 to found a nursing institute in Crewe, £2000 to endow a bed at University College Hospital (preferably to employees of the London and North-Western Railway Company), £1000 to the Men's Convalescent Home at Rhyl, £1000 to the Devonshire and Buxton Bath Charity, £1000 to the Manchester Royal Eye Hospital, and £500 to the Royal Albert Asylum for Idiots and Imbeciles at Lancaster.

THE LONDON HOSPITAL.—Mr. R. B. Haldane, Secretary of State for War, distributed the prizes to the successful students at the London Hospital in the library of the Medical College of that institution on July 13th. Mr. Haldane afterwards addressed the students on the subject of medical science, and in the course of his remarks observed that a lesson should be taken from the science of medicine which taught that the healing of the body depended on the understanding of the principles upon which life was governed.

Parliamentary Intelligence.

HOUSE OF LORDS.

MONDAY, JULY 16TH.

County Council and Ambulance Service.

On the third reading of the London County Council (General Powers) Bill Lord MONKSWELL endeavoured to have reinserted the proposals, which had been struck out by the Select Committee, to empower the Council to establish and maintain an ambulance service for dealing with cases of accident and illness in the streets. He could not make out why the committee had struck out the proposal.—Lord LEIGH pointed out that no city approaching London in size was without a proper ambulance service.—The chairman of the committee, the EARL OF CAMPERDOWN, contended that it was impossible to pass a scheme of which no details were given.—It was then stated by Earl BEAUCHAMP that the Government could not advise the House to agree to Lord Monkswell's suggestion. In the opinion of the Home Office the scheme had not yet received that mature consideration which it ought to have before complete power was given to the County Council. The Secretary of State believed that it would be better to follow the line of developing the resources already existing in London than by a revolutionary change to inaugurate an entirely new system, and he had summoned a conference representing the London County Council, the Metropolitan Police, and the Home Office to consider what should be done. It was not unlikely that a committee would be appointed from these three bodies to formulate a scheme.—Lord MONKSWELL expressed his satisfaction with this announcement and the matter dropped.

HOUSE OF COMMONS.

THURSDAY, JULY 12TH.

A Vaccination Case.

Mr. MONTGOMERY asked the President of the Local Government Board whether he was aware that Mr. W. C. Palmer of Merridge, Spaxton, near Bridgwater, applied on Sept. 29th, 1904, to the Bridgwater county petty sessional magistrates for a certificate of exemption from vaccination of his child and was refused; that subsequently he was prosecuted for refusing to have his child vaccinated; that the same bench made an order, with 10s. 6d. costs, directing him to have the child vaccinated, and afterwards fined him 20s. and 2s. costs for disobeying that order; that goods to the value of £10 had been seized to be sold in liquidation of the fine and costs which Mr. Palmer refused to pay on the ground that they were illegally imposed; and whether, in the circumstances, the President of the Local Government Board would countermand such sale.—Mr. GLADSTONE replied: My right honourable friend has asked me to answer this question. I have no information with regard to the facts of the case beyond that furnished by the honourable member in the question, but assuming his statement to be accurate I may say at once that neither I nor any other department of the Executive Government have power to interfere with the execution of a warrant of distress issued by a court of competent jurisdiction. It does not appear on what ground the validity of the magistrates' order is disputed, but if any question of law is involved that could only be determined by a court of law.

Fees for Vaccination.

Mr. JOHN JOHNSON asked the President of the Local Government Board whether he had taken any steps in the direction of reducing the high fees paid for vaccination; if so, what steps; and, if nothing definite had been done, would he say when the grievance complained of by the local authorities was likely to be redressed.—Mr. JOHN BURNS answered: I have not at present definitely decided what shall be done in this matter. I am giving attention to it and I will come to a decision as early as may be practicable.

MONDAY, JULY 16TH.

Conscientious Objectors.

Mr. LEHMANN asked the Secretary of State for the Home Department whether he was aware that Spencer Bray, J. J. Vann, and S. Bruin, of Blaby, in Leicestershire, were on Monday last committed to Leicester gaol, the first two for seven days and the last for 14 days, on orders under Section 31 of the Vaccination Act, 1867; and whether His Majesty's Government proposed to take any steps to alter the law so as to make such imprisonments impossible in future.—Mr. JOHN BURNS replied: My right honourable friend has asked me to reply to this question. I have no information as to the particular cases referred to, but I may point out that a parent would not be liable to any penalty under the Vaccination Acts for the non-vaccination of his children if he had obtained a certificate of conscientious objection under Section 4 of the Act of 1898. I am aware that the procedure with regard to obtaining such a certificate is not altogether satisfactory and I am considering whether some alteration might not properly be made in the law with regard to the matter.

Insurance of Lives of Children.

Mr. LEWIS HASLAM asked the Secretary of State for the Home Department whether, having regard to the fact that under the present laws affecting the insurance of the lives of children the death of a child might by means of insurance be a source of profit to the person insuring, he would consider the advisability of introducing a Bill to provide that there should be a limit to the amount payable on the death of a child, so that the amount payable should not exceed such as might be reasonably required to pay for the funeral expenses of the child.—Mr. GLADSTONE answered: I do not know whether my honourable friend is aware that by Sections 62–67 of the Friendly Societies Act, 1896, the sum for which a child under five years of age can be insured in one or more societies is limited to £6 and that by the Collecting Societies Act, 1896, Section 13, this limitation is extended to all industrial assurance companies. Great difficulties have arisen in the way of the numerous proposals which have been made to amend the law by further reducing this limit. I would refer my honourable friend to my reply to the hon. urable Member for the Tower Hamlets on Feb. 22nd last, in which I explained that the criminal law relating to this matter is already very severe, a parent who insures a child and then is guilty of cruelty or culpable neglect being liable to penal servitude for five years under Section 1, Subsection (4), of the Prevention of Cruelty to Children Act, 1904.

Experiments on Living Animals.

Mr. MACKARNESS asked the Secretary of State for the Home Department whether he could state when the committee which he proposed to appoint to investigate the subject of experiments upon living animals would hold its first meeting and of whom the committee would consist.—Mr. GLADSTONE answered: A Royal Commission on this subject is about to be appointed and the names of the Commissioners will be announced in due course when His Majesty has approved of them.

Medical Inspection of School Children.

In the course of the debate on the Education (England and Wales) Bill Mr. TENNANT proposed to amend one of the clauses in order to secure the compulsory medical inspection of children attending the schools. Nearly all the speakers supported the honourable Member.—Mr. BALFOUR expressed himself strongly in favour of compulsion. But he would have the scheme carried out on a general scientific plan—a plan applicable to the whole country, a plan which would enable them to compare area with area, children under one condition with children under another condition, and the children of one generation with the children of the next. When they had done that, and not till then, they would have some really solid scientific basis for what was now too often merely rhetoric and speculative conclusions about the effect of modern civilisation upon the health and progress of the race.—Mr. BIRRELL confessed that in this matter he was in the hands of the House. He was willing to submit to the judgment of the House that it should be made obligatory on every local authority to provide for the medical inspection of every child on application for admission to a public school and on such other occasions as the Board of Education might direct. The Board of Education was equally willing to receive inspiration from the House in the direction of strengthening its medical staff at headquarters for the purpose, not of carrying out the inspection of the schools—for that, of course, must be done by local medical men to be appointed by the local education authority—but of seeing that the local authorities were discharging the duties which they have at present power to discharge and also to keep in touch with what was going on in continental towns. But what he was not prepared to accept was the further suggestion that the Board of Education should prepare, generally for town and country, schemes for the medical inspection of school children. In order to deal with the matter according to the opinions of the House he was willing to put down for the report stage an amendment to the following effect: "It shall be the duty of every local authority to provide for the medical inspection of every child on its application for admission to a public elementary school and on such other occasion as the Board of Education may direct or the local education authority may think fit."—Mr. TENNANT accepted this promise and the further discussion of the subject was postponed until the report stage.

TUESDAY, JULY 17TH.

Another Vaccination Case.

Mr. JOHN TAYLOR asked the President of the Local Government Board whether he was aware that, in the prosecution of Mr. Dixon at Chester-le-Street police court on July 4th, the public vaccinator stated that he was the private medical attendant of the defendant, that the child in question was not well enough in health to be vaccinated within the period provided by statute, that had he called at the home he could only have postponed the vaccination for two months, but that his scale of payment was not sufficient to recompense him for calling at the home unless he could perform the vaccination; whether it was the duty of the public vaccinator, in cases where, in his opinion, children were too delicate or too ill to render vaccination advisable, to furnish the parents with certificates of postponement; and whether he would take steps to see that such protection was afforded to parents in the Chester-le-Street union.—Mr. JOHN BURNS answered: It is the duty of a public vaccinator to postpone the vaccination of a child if, at the time of his visit, the child is not, in his opinion, in a fit and proper state to be successfully vaccinated. I understand from the public vaccinator referred to in the question that he always adopts this course and that he did not make the statement attributed to him as to the insufficiency of his scale of payment to recompense him for calling at the home unless he could perform the vaccination. He further states that in the particular instance mentioned his partner was Mr. Dixon's medical attendant and that the child had been delicate until the age of about four and a half months but was fit for vaccination at the time the father told him that he would have the child vaccinated by his own medical man.

BOOKS, ETC., RECEIVED.

CHURCHILL, J. AND A., 7, Great Marlborough-street, London, W.

Surgery, its Theory and Practice. By William Johnson Walsham, F.R.C.S. Eng., M.B. & C.M. Aberd., formerly Surgeon and Lecturer on Surgery, St. Bartholomew's Hospital, and Member of the Court of Examiners, Royal College of Surgeons of England. Ninth edition. By Walter George Spencer, M.S., M.B. Lond., F.R.C.S. Eng., Surgeon and Lecturer on Surgery to the Westminster Hospital, Examiner in Surgery, University of London. Price 18s. net.

EVERETT AND CO., 42, Essex-street, Strand, London, W.C.

The Elements of the Practice of Comparative Medicine, together with Records of Some Cases. By Frank Townend Barton, M.R.C.V.S., Author of the "Veterinary Manual," "The Practice of Equine Medicine," and George Gresswell, M.A. Oxon., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasgow, Author of "Compensation in Nature." Price 5s. net.

GALE AND POLDEN, LIMITED, 2, Amen Corner, Paternoster-row, London, E.C.

Guide to Promotion for Non-commissioned Officers and Men of the Royal Army Medical Corps, with Appendix on Hints for Young N.C.O.'s on Clerical and Other Duties in a Military Hospital. Compiled by Captain S. T. Beggs, M.B., Royal Army Medical Corps (M.), formerly House Surgeon and House Physician, Royal Victoria Hospital, and Demonstrator of Physiology, Queen's College, Belfast. Price 3s. 6d. net.

GREEN, WILLIAM, AND SONS, Edinburgh and London.

Guide to Anæsthetics. For the Student and General Practitioner. By Thomas D. Luke, M.B., F.R.C.S. Ed., Lecturer on Anæsthetics, Edinburgh University, Anæsthetist to the Deaconess Hospital and the Dental Hospital, Edinburgh. Third edition. Price 5s. net.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin.

Arbeiten aus dem Pathologischen Institut zu Berlin. Zur Feier der Vollendung der Instituts-Neubauten. Herausgegeben von Johannes Orth, Direktor des Instituts. Price M.18.

LAURIE, T. WERNER, Clifford's Inn, Fleet-street, London, E.C.

The Cathedrals and Churches of the Rhine and North Germany. By T. Francis Bumpus. Price 6s. net.

LEHMANN, J. F., München.

Lehmann's Medizinische Atlanten. Band IV. Atlas der deskriptiven Anatomie des Menschen. Von Dr. med. J. Sobotta, ao. Professor und Prosektor der Anatomie und der anthropotomischen Anstalt in Würzburg. III. Abteilung. 1. Lieferung: Das Nerven- und Gefässsystem des Menschen. Price M.16.

MARHOLD, CARL, Halle a.S.

Der moralische Schwachsinn. Allgemeinverständlich dargestellt für Juristen, Aerzte, Militärärzte und Lehrer. Von Dr. Schaefer, Oberarzt a.D.d. Irrenanstalt Friedrichsberg in Hamburg. Price M.3. (Zugleich Heft 4-6 des IV. Bd. d. Juristisch-psychiatrischen Grenzfragen.)

MASSON ET CIE., 120, Boulevard Saint-Germain, Paris.

Traité Pratique de Technique Orthopédique. (3e Fascicule.) Technique du Traitement des Tumeurs Blanches. Par le Dr. F. Calot, Chirurgien en chef de l'Hôpital Rothschild, de l'Hôpital Cazin-Perrochaud, de l'Hôpital de l'Oise et des Départments, du Dispensaire, de l'Institut Orthopédique de Berck, &c. Price Fr. 7.

OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, India, 8, Hastings-street, Calcutta.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New Series. No. 24. On a Parasite Found in the White Corpuscles of the Blood of Palm Squirrels. By Captain W. S. Patton, M.B., I.M.S. Price 12 annas, or 1s. 2d.

PENTLAND, YOUNG J., Edinburgh and London.

The Edinburgh Medical Journal. Edited by Alexis Thomson, M.D., F.R.C.S. Ed., and Harvey Littlejohn, M.B., F.R.C.S. Ed. New Series. Vol. XIX. Price not stated.

REID, ANDREW, AND CO., LIMITED, Printing-court Buildings, Akenside Hill, Newcastle-upon-Tyne.

The History of the Newcastle Infirmary. By George Haliburton Hume, D.C.L., M.D., F.R.C.S. Edin., Consulting Surgeon to the Royal Infirmary. Price 10s. 6d., post free.

SPRINGER, JULIUS, Monbijouplatz, 3, Berlin.

Untersuchungen über Aminosäuren, Polypeptide und Proteine (1899-1906). Von Emil Fischer. Price M.16.

SWAN SONNENSCHEIN AND CO., LIMITED, 25, High-street, Bloomsbury, London, W.C.

The Girls' School Year-Book. (Public Schools), with The Index of Schoolmistresses. First Year of Publication. 1906. Issued under the Direction of the Editors of "The Public Schools Year-Book." Price 2s. 6d. net.

The Science of Common Life. A Theoretical and Practical Text-book for Students in Secondary, Domestic Economy, and Rural Schools. By John B. Coppock, B.Sc. Lond., F.I.C., F.C.S., Associate of Nottingham University College, Principal of the Kendal Science Schools, Author of "Volumetric Analysis." Price 3s. 6d.

VIEWEG, FRIEDRICH UND SOHN, Braunschweig.

Lehrbuch der Anorganischen Chemie. Von Prof. Dr. H. Erdmann, Direktor des Anorganisch-Chemischen Instituts der Königlichen Technischen Hochschule zu Berlin. Vierte Auflage (Neuntes bis zwölftes Tausend). Price M.15.; bound, M.16 and M.17.

W. B. SAUNDERS COMPANY, Philadelphia and London.

Atlas and Text-book of Human Anatomy. By Dr. Johannes Sobotta, Professor of Anatomy in the University of Würzburg. Edited, with Additions, by J. Playfair McMurrich, A.M., Ph.D., Professor of Anatomy in the University of Michigan. Volume I., Bones, Ligaments, Joints, and Muscles. Price 25s. net per volume.

A Treatise on Surgery. By George Ryerson Fowler, M.D., Brooklyn, New York City, Examiner in Surgery, Board of Medical Examiners of the Regents of the University of the State of New York. Volume II. Price £1 11s. 6d.

WOOD, WILLIAM, AND CO., New York.

A Text-book on the Practice of Medicine. For Students and Practitioners. By James Magoffin French, A.M., M.D., formerly Lecturer on the Theory and Practice of Medicine, Medical College of Ohio. Second revised edition. Price $4.00 net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ARCHDALE, MERVYN A., M.B., B.S. Durh., has been appointed Medical Superintendent at the East Riding Asylum, Beverley.

ATTLEE, CECIL K., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician at the Evelina Hospital for Sick Children.

BIRCH, CHARLES, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to Clayesmore School, Pangbourne, Berks.

CURTIS, WILFRED, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Sixth District by the Liskeard (Cornwall) Board of Guardians.

DOUGLAS, CARSTAIRS C., M.D. Edin., has been appointed Extra Examiner in Medical Jurisprudence and Public Health in the University of Aberdeen.

GAINER, J. W., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Thrapston District of the county of Northampton.

GOYDER, F. W., M.B., B.C. Cantab., has been appointed Honorary Assistant Surgeon to the Royal Infirmary, Bradford.

HODGE, R. P. VERE, M.B., B.C. Cantab., has been appointed Resident Medical Officer for the Out-patient Department of Queen Charlotte's Lying-in Hospital.

HUSTLER, G. H., M.B., Ch.B. Leeds, has been appointed Assistant House Surgeon at the Royal Devon and Exeter Hospital, Exeter.

IRVING, HAMILTON, M.B., B.S. Lond., M.B., Ch.B. Manch., has been appointed House Surgeon at the Evelina Hospital for Sick Children.

KILVERT, JOHN ELLIS, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Derbyshire Royal Infirmary.

KIRKNESS, W. RONALD, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon and Assistant Secretary to the West Herts Infirmary, Hemel Hempstead.

MACLAGAN, P. A., M.B., B.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Ayton District of the county of Berwick.

MARSHALL, H. F., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon at the Evelina Hospital for Sick Children.

MORTON, A. STANFORD, M.B., M.S. Edin., has been appointed Ophthalmic Surgeon to the Italian Hospital, Queen-square, W.C.

STANLEY-JONES, H., M.B. Lond., M.R.C.S., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRADFORD POOR-LAW UNION HOSPITAL AND WORKHOUSE.—Resident Assistant Medical Officer, unmarried. Salary £100, with rations apartments, and washing.

BRADFORD, ROYAL INFIRMARY.—Medical Officer, unmarried. Salary £100 per annum, with board and residence.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—House Physician, unmarried Salary £70 per annum, with board and residence.

BRIGHTON THROAT AND EAR HOSPITAL, Church-street, Queen's-road.—Non-resident House Surgeon for six months, renewable. Salary at rate of £75 per annum.

BURNLEY, VICTORIA HOSPITAL.—Resident Medical Officer. Salary £100, with residence, board, and washing.

CAMBRIDGESHIRE, &c., ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £120 per annum, with board, lodging, and attendance.

CANCER HOSPITAL, Fulham-road, London, S.W.—Medical Officer in Charge of Electrical Department. Honorarium £26 5s. per annum

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Junior House Surgeon. Salary £50 a year, with board, apartments, and laundry.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at rate of £50 per annum, with board, residence, &c.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant to the Resident Medical Officer for six months. Salary at rate of £50 a year, with board and lodging.

EGYPTIAN GOVERNMENT, MINISTRY OF EDUCATION.—Professor of Midwifery and Gynæcology. Salary £400 a year. Also Medical Tutor and Registrar to Kasr-el-Ainy Hospital. Salary £400 a year.

ESSEX AND COLCHESTER GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, washing, and residence.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, S.E.—Physician to Out-patients.

HARTLEPOOLS HOSPITAL.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

HEREFORDSHIRE GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, apartments, and washing.

HOSPITAL FOR SICK CHILDREN, Newcastle-on-Tyne.—Resident Medical Officer. Salary £100, with board, lodging, and laundry.

KIRKBURTON, NEAR HUDDERSFIELD, STORTHES HALL ASYLUM.—Locum Tenens for two months. Salary £3 3s. per week, with board, lodging, and attendance.

LINCOLN LUNATIC HOSPITAL.—Assistant Medical Officer. Salary £100, with board, &c.

LIVERPOOL EYE AND EAR INFIRMARY, Myrtle street, Liverpool.—House Surgeon. Salary £80 per annum, with board and residence.

LONDON COUNTY COUNCIL.—Medical Officer to the staff engaged on the construction of Rotherhithe Tunnel. Salary £400 per annum.

MANCHESTER, CHORLTON-UPON-MEDLOCK DISPENSARY.—Resident House Surgeon, unmarried. Salary £120 per annum, with rooms and attendance.

MANCHESTER, UNIVERSITY OF.—Junior Demonstrator in Physiology. Salary £100, rising to £150 per annum.

MIDDLESEX HOSPITAL, CANCER RESEARCH LABORATORIES.—Research Scholarship. Value £105.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House Surgeon for six months, renewable. Salary at rate of £50 per annum, with board, residence, and washing.

PRESTON ROYAL INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with board, lodging, washing, &c. Also Assistant House Surgeon. Salary £60 per annum, with board, washing, &c.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing. Also Physician to Out-patients.

ST. MARY'S HOSPITAL, PADDINGTON.—Resident Assistant Anæsthetist for six months. Salary at rate of £100 per annum, with board and residence.

SHEFFIELD UNION HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with apartments, rations, &c.

SHOREDITCH INFIRMARY, Hoxton-street, N.—Second Assistant Medical Officer for six months. Salary £100 per annum, with rations, washing, and apartments.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months Salary at rate of £40 per annum, with board, washing, and residence.

SUNDERLAND INFIRMARY.—Two House Surgeons. Salary £80 per annum, with board, residence, and washing.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Physician for six months. Honorarium £25, with board and lodging.

WEST BROMWICH DISTRICT HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

WISBECH, NORTH CAMBRIDGESHIRE HOSPITAL.—Resident Medical Officer.

WORCESTER GENERAL INFIRMARY.—House Physician. Salary £80 per annum, with board and residence.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Blakeney, in the county of Gloucester, and at Blaydon-on-Tyne, in the county of Durham.

Births, Marriages, and Deaths.

BIRTHS.

CORY.—On July 10th, at Manor House, Soham, Cambs, the wife of C. G. Cory, M.R.C.S., L.R.C.P., of a son.

CUFF.—On the 16th inst., at The Lodge, Ashtead, Surrey, to Dr. and Mrs. Herbert Cuff—a daughter.

HARNEIS.—On July 12th, at Amhurst-road, Hackney, the wife of T. W. Morcom Harneis, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

INKSON.—On July 16th, at Wrottesley-road, Woolwich, the wife of Captain E. T. Inkson, V.C., Royal Army Medical Corps, of a son.

MCMURTRY.—On July 12th, at East-hill, Wandsworth, S.W., the wife of W. D. McMurtry, L.R.C.S. & P. Edin., L.F.P.S. Glasg., of a daughter.

WALSH.—On July 10th, at Prospect-road, Old Brompton, Chatham, the wife of Fleet Surgeon J. J. Walsh, M.B., R.N., H.M.S. *Blenheim*, of a son.

MARRIAGES.

FAIRWEATHER—BELL.—On July 12th, at the Cathedral, Rochester, Francis Harold Fairweather, M.D., of Chatham, to Emily Maud, youngest daughter of J. Vincent Bell, M.D., of Rochester.

MAITLAND—WILKIN.—On July 12th, at Perivale Church, A. Derwent Maitland, M.R.C.S., L.R.C.P., L.S.A., to Effie, youngest daughter of Captain and Mrs. Wilkin.

NEWBOLT—ELLIOT.—July 11th, at St. Bride's Church, Liverpool, by the Rev. Bernard C. Jackson, M.A., George Palmerston Newbolt, M.B., F.R.C.S., of 42, Catharine-street, to Lila, only daughter of the late John Elliot, Esq., Canonbie, Dumfriesshire.

DEATHS.

BLACKBURN.—July 7th, at Ivy House, Barnsley, John Blackburn, M.R.C.S., aged 72. Interred at Bradfield, near Sheffield, Tuesday, July 10th.

EDDOWES.—On July 11th, at Burleigh Fields, Loughborough, John Henry Eddowes, M.D., J.P., in his 84th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

AN ANTIVIVISECTION FOUNTAIN.

LAST week a proposal to erect an "antivivisection" fountain in memory of a dead dog in the Latchmere Recreation Ground, Battersea, was discussed by the Battersea borough council. A year ago or thereabouts the council agreed to accept the fountain from the International Antivivisection Council. There was to be an inscription which some persons regarded as libellous. At the meeting it was recommended by the highways committee that the Antivivisection Council should be informed that the fountain may now be erected. A proposal was made to defer the matter *sine die*. This was violently opposed. Wild statements were made in respect to the "torture of animals" and "the dishonest use of money which working men had contributed to hospitals." A shorthand writer, understood to represent University College, was asked to retire and it was asserted that members of the council had given information to the College the authorities of which had written that proceedings would be taken if the fountain with the inscription were erected. On the other hand, the secretary to the Antivivisection Council wrote offering to deposit money for the defence. Borough councillors asserted that if medical students came to Battersea "to make a disturbance and smash the fountain" they would find other than passive resisters to deal with. Dr. L. S. McManus, who is a member of the council, characterised the denunciation of the medical profession as humbug. On a vote being taken 29 voted for the reception of the fountain and 19 against.

UNMANNERLY.

To the Editors of THE LANCET.

SIRS,—I was surprised to read in THE LANCET of July 14th the letter signed "L.R.C.S. & L.R.C.P. Edin." There was nothing in my letter that could possibly be construed into an attack on the Scottish Conjoint Diploma. As you explained in a footnote—though it should have been obvious enough—my introduction of details of qualifications was merely to show that Mr. D would have suffered no loss of dignity by meeting me. In a precisely similar case last year, where I again acted for Mr. A, I had a very agreeable and instructive consultation with the medical practitioner in charge of the case.

I am sorry your correspondent has taken umbrage at what I wrote, but I feel sure that if he will read my letter again he will see that the injury is imaginary. I am, Sirs, yours faithfully,

July 14th, 1906. M.D. Lond.

To the Editors of THE LANCET.

SIRS,—I beg to offer my opinion in the above case, taking the facts to be as stated. My sympathies are with the medical attendant of the sick man. If the patient and his relatives were satisfied with the medical attendance it would have been well for the employer not to have interfered. If the employer wished to do acts of kindness he could have sent sick-room delicacies, &c., approved by the patient's medical man. When the medical man attending offered to meet a consultant I consider he did all that was necessary. The fact that Dr. C—the complainant—was the employer's medical man fails, to my mind, simply on that account to place him on a higher plane than the foreman's medical man. If the employer thought fit to say "impolite things" of his workman's medical man I think they were undeserved and uncalled for. Surely Dr. C does not seriously ask one to believe that because a general practitioner happens to be on the staff of a hospital he is, *ipso facto*, superior to general practitioners who are not? With such a weak case I consider Dr. C's appearance in public print unfortunate. I am proud to sign myself

July 14th, 1906. ANOTHER L.R.C.P., L.R.C.S. EDIN.

*** "M.D. Lond." states definitely above what we knew (otherwise his letter would not have been printed)—viz., that he assumed no superiority. He quoted his position as showing that no obvious inferiority could justify the brusque treatment that he received.—ED. L.

THE TEETH OF WORKING-CLASS CHILDREN.

A MOVEMENT having for its object the better care of the teeth of the working-class children is making considerable progress in certain contiguous districts in the centre of Europe. One of the leaders is Dr. Jessen of Strasburg who has succeeded in establishing a school dental clinic at that town. To it the school children are sent regularly for examination. Each child is quickly examined, the result is noted on a card, and a note is added as to the treatment required. The dental clinic does not press children to submit to treatment but it is ready to undertake the work if need be. This it does at a cost of about £320 per annum, almost 3½d. per head of the school population. The expenses are met by grants in aid and voluntary contributions. With treatment teaching goes hand in hand; the child is instructed in the use of a tooth-brush and the teacher discusses teeth, their uses and their care, in his natural history lesson soon after his class returns from the examination. Wall pictures illustrating the growth of the teeth are now to be had for demonstration purposes. In Wiesbaden and Mülhausen school dental clinics will be opened shortly. The initial expense at Mülhausen (90,000 inhabitants) is calculated at £650. In Winterthur Dr. Helbing has lately completed an examination of the teeth of 2400 children. He finds that only 1 child in 40 has a perfect denture and that over 23 per cent. of the teeth examined are bad. As a result of his representations the local school board has decided to add the examination of pupils' teeth to the duties of the medical officer who undertakes the medical examination of the newly enrolled children. At Langenthal, a railway centre and an agricultural district of the canton of Berne, the school board issues circulars to parents enjoining them to pay attention to the state of their children's teeth. For some time past the board has bought tooth-brushes wholesale and has retailed them at slightly over cost price to the children. In this manner it makes a slight profit which is expended in distributing tooth-brushes gratis among poor children.

ADVERTISEMENTS IN PUBLIC URINALS.

To the Editors of THE LANCET.

SIRS,—Could not some method be devised for putting a stop to the placarding of public urinals with all sorts of filthy quack advertisements? Surely the various authorities might put up notices threatening to punish any person who shall affix an advertisement of any kind on the walls of public urinals, either inside or out, and the person who is commissioned to look after these places might be ordered to take round with him each morning a pail and brush and scrape down any advertisements so appearing. I am, Sirs, yours faithfully,

July 13th, 1906. F. H. A.

*** Some authorities are more active than others in doing exactly what our correspondent suggests.—ED. L.

CURIOUS NAMES.

IN the column of the *Standard* of July 18th headed Births, Deaths, and Marriages the surname "Godbehere" appears in the deaths. Such names as Deogratias, Deusdedit, and the like were common among the North African Christians of the fourth and fifth centuries. Everyone will remember Adeodatus the son of St. Augustine. In these cases the names were probably translations of Semitic names, such as Mattathiah or Nathaniel, but in English such names are very rare and it would be interesting to trace the steps by which they came to be adopted into our language. The members of the medical profession come more into contact with all sorts and conditions of men than do those of any other profession, the clergy possibly excepted. Some years ago we remember a medical man practising in Norfolk made an interesting collection of curious and out-of-the-way Christian names existing in remote districts of that county and we hope that any of our readers who come across similar names, either Christian or surname, will communicate them to us. Names are always of interest, for in them is often preserved much historical fact dealing with racial characteristics and the like.

THE ARGENTINE BOOT HEEL.

WE have received from the Patent Argentine Heel Company specimens of their boot heels. The heel consists of two layers of leather with one layer of vulcanised indiarubber between them. The surface which touches the ground being leather there is not the same danger of slipping in wet weather as occurs with an indiarubber heel in which the rubber is in contact with the pavement. One of our representatives who has tried these heels fitted to an ordinary pair of shoes for walking about London reports that he finds them more comfortable than plain leather heels. They can be obtained from all bootmakers.

THE PREPARATION OF INFANTS' FOOD.

AT the invitation of Mr. Cornelius Hanbury, the chairman of Messrs. Allen and Hanburys, Limited, a number of medical men, scientific experts, and press representatives visited the works of the firm on Tuesday last at Ware in Hertfordshire, in which the manufacture of the "Allenburys foods" and the "Allenburys diet" is carried on. A special train was provided for the visitors at Liverpool-street and there were present at the inspection about 200 ladies and gentlemen. The various processes by which the Allenburys foods are prepared were watched with interest. An advantage of the works being situated at Ware is that this town is in the middle of rich pasture-land, so that the milk used in the foods is perfectly fresh and not exposed to the contaminating influences of a long journey. As to the composition of these foods we have already given our analyses of them under the heading of Analytical Records in THE LANCET of March 24th, 1894, p. 748. The manufacturers always lay stress on the necessity of the directions as to how to use the food being carefully followed. Thus one important direction as meeting the objection that these foods are sterilised and therefore lacking in the fresh or vital element of raw milk is to supplement the food with the occasional use of raw meat juice or fresh grape juice, or white of egg. The foods are malted, contain a good proportion of cream, and the milk proteid is digestible, the casein clotting only loosely or not at all, whereas in the case of cow's milk the casein clots densely and in that form is indigestible. At a luncheon which followed the inspection Mr. Cornelius Hanbury gave a history of the manufacture of the Allenburys foods and drew attention to the fact that they always received the best advice that could be given on the subject of infant feeding, and as views advanced so they introduced any modifications that might be held to be necessary in the preparation of the foods.

A. Z. is thanked for a communication which we will publish in an early issue.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 19th, 1906.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
July 13	30·08	S.W.	0·01	121	72	51	55	58	Fine
" 14	30·02	N.W.	...	121	77	58	58	64	Fine
" 15	30·00	S.W.	..	105	70	56	56	60	Cloudy
" 16	30·05	W.	0·04	120	74	54	56	62	Fine
" 17	30·07	N.W.	....	127	80	62	63	68	Fine
" 18	29·95	W.	..	125	83	59	60	63	Fine
" 19	29·81	W.	0·09	100	63	61	61	63	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (3 P.M.).

TUESDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.).

WEDNESDAY (25th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.).

THURSDAY (26th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.).

FRIDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), St. Mark's (2.30 P.M.).

SATURDAY (28th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. S. E. Dore: Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. Diseases of the Eye.

TUESDAY (24th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. E. Cautley: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10.30 A.M.: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. Diseases of the Skin.

WEDNESDAY (25th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. C. Ryall: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Diseases of the Throat, Nose, and Ear. Diseases of Children. 2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. Diseases of Women.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M.: Demonstration:—Dr. A. Wylie: Pharynx.

THURSDAY (26th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. Diseases of the Eye.

FRIDAY (27th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10.30 A.M.: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. Diseases of the Skin.

SATURDAY (28th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. Diseases of Women.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1906, which was completed with the issue of June 30th, and the Title-page to the Volume, were given in THE LANCET of July 7th.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1906 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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During the week marked copies of the following newspapers have been received: *Morning Leader, Globe, Bristol Times, Cork Constitution, Dundee Courier, Morning Post, Bolton Chronicle, Bristol Mercury, Westminster Gazette, Birmingham Post, Daily Telegraph, Hampshire Advertiser, Southampton Echo, Daily News, Wolverhampton Midland Express, Newcastle Chronicle, Herts Mercury, Scientific American, Glasgow Herald, &c.*

Communications, Letters, &c., have been received from—

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